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Revision of the Afrotropical rove-beetles of the genus *Megarthrus* (Coleoptera, Staphylinidae, Proteininae)[1]

Giulio CUCCODORO[2] & Ivan LÖBL[3]

[2, 3] Muséum d'histoire naturelle, Case postale 6434, CH-1211 Genève 6, Switzerland.
[2] The Natural History Museum, Cromwell Road, London SW7 5BD, UK.

Revision of the Afrotropical rove-beetles of the genus *Megarthrus* (Coleoptera, Staphylinidae, Proteininae). - *Megarthrus* species from Africa South of Sahara are revised. In addition to 11 species previously described, the following 27 new species are recognised: *M. bantu, M. clarkei, M. dominicae, M. falasha, M. horticola, M. hutu, M. magnicaudatus, M. mahnerti, M. major, M. maniwaata, M. merabet, M. mukankundiyeorum, M. mwami, M. nanus, M. negus, M. niloticus, M. panga, M. ras, M. rougemonti, M. scotti, M. selenitus, M. spinosus, M. stylifer, M. twa, M. vanschuytbroecki, M. watutsi* and *M. zulu*. Lectotypes are designated for *M. abessinus* Bernhauer and *M. africanus* Eichelbaum. Descriptions are provided and diagnostic characters are figured for all species, except for *M. kamerunensis* Bernhauer which is not represented in the collections. Keys to species are given separately for males and females. Most of these species occurs in the highlands and mountains of East Africa (27 spp.) and in Ethiopia (9 spp.). Only one species has been found South of 11°S latitude. The genus appears to be absent from Madagascar, the Mascarene Archipelago and Africa west of Cameroon.

Key-words: Staphylinidae - Proteininae - *Megarthrus* - taxonomy - Africa.

INTRODUCTION

The Proteininae are one of the staphylinoid taxa with a distinct bipolar distribution (Newton, 1985), though with several tropical members. With the Neophoninae, Micropeplinae, Dasycerinae and Pselaphinae, it shares atrophied spiracles on the abdominal segments 4 to 6, which suggests that these groups may form a monophyletic group. Neophoninae differ from the last three taxa and from the

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Proteininae in the undivided male 9th tergite (THAYER, 1987). Thus the Proteininae are important for the understanding of the relationships within the other, more derived members of the omaliine group.

STEEL (1966) defined within the Proteininae the south temperate tribes Anepiini and Nesoneini with 10 species in 8 genera, and the predominantly north temperate Proteinini which go as far south as New Guinea and, in the New World, north Argentina. Apart from keys to genera and a few regionally restricted revisions of *Proteinus* Latreille and individual species descriptions (e.g. COIFFAIT, 1982; HAYASHI, 1988), no taxonomic work has been done recently on the Proteinini. The lack of taxonomic information is particularly striking in *Megarthrus* which may be the most diverse goup within the subfamily, in terms of species number, ecology and distribution.

Some 80 species of *Megarthrus* are recognised to date, from which 11 have been described from the Afrotropical region. The revision of unstudied material, however, shows that the diversity in this region (38 species) is much greater than previously estimated. The present paper diagnoses the Afrotropical species and provides keys and illustrations for identification. Phylogenetic and biogeographical relationships are briefly discussed.

MATERIALS AND METHODS

The present study is based exclusively on adults. Unless specified, all material (776 specimens) mentioned in the text has been examined. For detailed examination, specimens were dissected, cleared in 0.1 N potassium hydroxide and mounted in Eukit or Canada balsam on acetate slides. Drawings were made using a drawing tube. Detailed locality data are reproduced according to labels, except for elevations which are given in m. Major administrative units are given in English.

The term frons, as used in the present study refers to the area anterior of the U-shaped impression, the vertex to the area behind. Patches of sensilla on antennomeres 6 to 10 were detected by examining slide preparations. Abdominal sternites and tergites are counted from the first morphological segment. Measurements and ratios are defined as follows: length of specimens = interval from middle of anterior pronotal margin to inner apical angle of elytron; width of specimens = maximum pronotal width; AL = antennal length / pronotal length; EL = elytral sutural length / pronotal length; ET = elytral sutural length / shortest interval between sutural margin and lateral edge of elytron in dorsal view; EW = shortest interval between sutural margin and outer apical angle of elytron in dorsal view / shortest interval between sutural margin and lateral edge of elytron in dorsal view; EY = interval between posterior ocular margin and apex of frons in dorsal view / interval between anterior and posterior ocular margins in dorsal view; GT = posterior width of gula / median length of gula; GW = width of neck / posterior width of gula; HW = maximum pronotal width / interval between posterior ocular margins in dorsal view; ML = median metasternal length / median mesosternal length; MP = length of segment 4 of maxillary palpus / length of segment 3 of maxillary

palpus; PT = maximum pronotal width / pronotal length; SP = maximum width of abdominal sternite 8 / width of the basal projection; TPF = interval between basal angle and tip of medioapical projection of female abdominal tergite 8 / lateral length of medioapical projection of female abdominal tergite 8. The absence of that projection is indicated as "abs".

Material examined is deposited in the following collections: BMNH = The Natural History Museum, London; CNCI = Canadian National Collection of Insects, Ottawa; FMNH = Field Museum of Natural History, Chicago; MHNG = Muséum d'histoire naturelle, Geneva; MRAC = Musée Royal de l'Afrique Centrale, Tervuren; SEMC = Snow Entomological Museum, University of Kansas, Lawrence; TMSA = Transvaal Museum, Pretoria; ZMHB = Museum für Naturkunde der Humboldt-Universität, Berlin.

NATURAL HISTORY AND ECOLOGY

Little is known about the life history and biology of *Megarthrus* spp. The water loading behaviour noted by Cuccodoro (1995) has been also observed in two Afrotropical species *M. horticola* and *M. spinosus*. The Afrotropical members of *Megarthrus* possess fully developed wings and are found in a wide range of habitats (savannas, forests, in leaf litter, humus, and under stones). According to locality labels they have been found in dung of various mammal species, in fungi and decaying vegetational matter. They also have been collected in carrion, meat and faeces traps.

TAXONOMY

Within the Proteinini, adult members of the genus *Megarthrus* may be distinguished by the absence of a vertexal ocellus, the pronotum medianly impressed or sulcate, and the lateral pronotal edges denticulate or crenulate. Compared to the so far examined congeners from other regions, the Afrotropical *Megarthrus* appear quite homogeneous. They share the following characters: mesal portion of frons with setae orientated backwards; pronotal and elytral pubescence recumbent; abdominal pubescence parallel, except for tergite 3 bearing short setae converging toward base; frons with mesal portion slightly arcuate anteriorly and straight posteriorly in lateral view; supra-ocular margin sinuate in dorsal view; occipital ridge indistinct; antennal scape not flattened; pronotal disc weakly convex in frontal view, with mesal portion almost straight in lateral view; hypomeral groove and median prosternal ridge absent; elytron with discal swellings low, lateral edge finely carinate; metasternum with the femoral line arcuate in middle; median apophysis of abdominal sternite 3 with apical portion straight; male sternite 9 lacking subbasal protuberance.

The keying of Afrotropical *Megarthrus* is difficult without reference to sexual characters. As several species are represented by are sex only, separate keys are provided for males and females. At this stage in our investigations of *Megarthrus* no attempt has been made to analyse phylogenetic relationships. Therefore, no species

FIG. 1

Distributional pattern of the Afrotropical species of *Megarthrus*. a: Ethiopian area (9 spp); b: Equatorial area (28 spp); c: South-African area (1 sp). Scale square = 63'550 km^2.

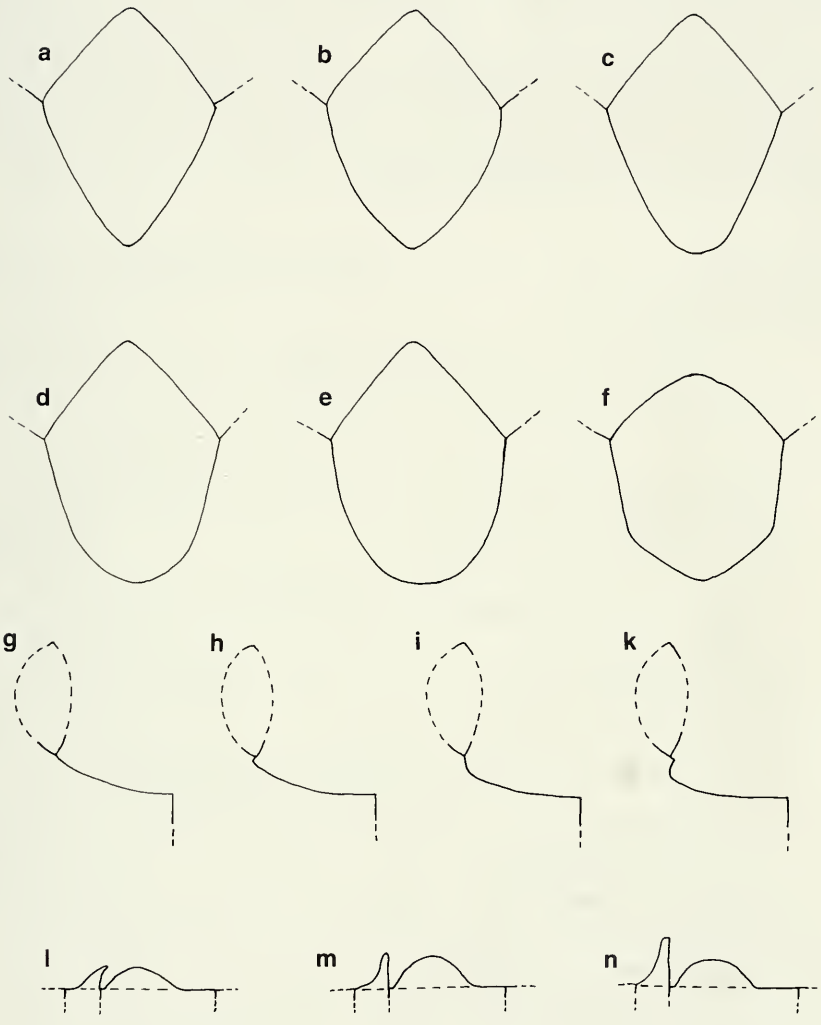

FIG. 2

Scutellum, a-f; Temple, g-k; Median processes of abdominal sternites 2-3 (left to right), l-n; schematic. *Megarthrus abessinus*: a, g, l; *M. africanus*: f, i, n; *M. clarkei*: c; *M. congoensis*: d, k; *M. falasha*: b, h; *M. gigas*: m; *M. mwami*: e.

groups are defined and the species are listed alphabetically. However, some of the species are linked by particularly noteworthy characters: 1) *M. nanus* and *M. zulu* possess a protrochanteral ridge; 2) *M. panga* and *M. stylifer* have a large ventral process on the male abdominal tergite 8; 3) *M. africanus*, *M. basilewskyi*, *M.gigas*, *M. major*, *M. mukandudiorum*, *M. selenitus*, and *M. spinosus* lack a medioapical projection of the female abdominal tergite 8 and adhesive setae on male protarsi. Among these species, *M. basilewskyi*, *M.gigas* and M. major have a conspicuously projecting inner apical angle of the elytra in the female; 4) *M. mahnerti* and *M. monticola* are linked by a bilobed apical margin of the female sternite 8.

KEY TO MALES

(not included are *M. apicicornis*, *M. major*, *M. scotti*, *M. selenitus*, and *M. spinosus* in which only females are known).

1 Apical margin of 6th abdominal sternite incised. . . . *M. kamerunensis* Bernhauer
– Apical margin of 6th abdominal sternite truncate. 2
2 Eighth abdominal tergite bearing a ventral process projecting ventrally (Fig. 59f) 3
– Eighth abdominal tergite lacking a ventral process projecting ventrally. 4
3 Tip of aedeagus broad (Fig. 59a). . . . . *M. stylifer* sp. n.
– Tip of aedeagus narrow (Fig. 49b). . . . . *M. panga* sp. n.
4 Protarsal segment 1 bearing adhesive setae (Fig. 3d). 8
– Protarsal segment 1 lacking adhesive setae (Fig. 22g). 5
5 Aedeagus symmetrical. . . . . *M. africanus* Eichelbaum
– Aedeagus asymmetrical. 6
6 Protibia lacking peg-like setae. . . . . *M. mukankundiyeorum* sp. n.
– Protibia bearing peg-like setae (Fig. 9g). 7
7 Ventral wall of aedeagal median lobe notched on the left side (Fig. 9b) . . . . . *M. basilewskyi* Fagel
– Ventral wall of aedeagal median lobe not notched (Fig. 20c). . . . *M. gigas* Fagel
8 Aedeagus asymmetrical. . . . . *M. ovalis* Cameron
– Aedeagus symmetrical. 9
9 Tip of aedeagus hook-shaped (Fig. 63d). . . . . *M. vanschuytbroecki* sp. n.
– Tip of aedeagus not hook-shaped. 10
10 Protibia bearing peg-like setae (Fig. 3d). 11
– Protibia lacking peg-like setae. 12
11 Aedeagal median lobe, in ventral view, with apical portion slender, near tip somewhat narrower than middle (Fig. 3a). . . . . *M. abessinus* Bernhauer
– Aedeagal median lobe, in ventral view, with apical portion wide at base and evenly tapering (Fig. 27e). . . . . *M. magnicaudatus* sp. n.
12 Dorsoapical sclerite of aedeagal median lobe projecting proximally of level of parameres (Fig. 16c). 13
– Dorsoapical sclerite of aedeagal median lobe not projecting proximally of level of parameres (Fig. 18b). 23

13 Metatrochanter lacking peg-like setae. . . . . *M. rougemonti* sp. n.
– Metatrochanter bearing peg-like setae. 14
14 Metatibia lacking peg-like setae. 15
- Metatibia bearing peg-like setae. 16
15 Ventral wall of aedeagal median lobe notched basally (Fig. 16c) . . . . . *M. dominicae* sp. n.
– Ventral wall of aedeagal median lobe not notched (Fig. 23b). *M. horticola* sp. n.
16 Mesotrochanteral peg-like setae arranged in a single row. 17
– Mesotrochanteral peg-like setae arranged in a double row or grouped in a field 19
17 Tip of aedeagus truncate obliquely (Fig. 29e). 18
– Tip of aedeagus rounded (Fig. 40b). . . . . *M. mwami* sp. n.
18 Aedeagus straight near tip (Fig. 29e). . . . . *M. mahnerti* sp. n.
– Aedeagus inflexed dorsally near tip (Fig. 36d). . . . . *M. monticola* Cameron
19 Tip of aedeagus broad (Fig. 45d). 20
– Tip of aedeagus narrow (Fig. 7a). 21
20 Metatibial peg-like setae partly arranged in a row (Fig. 45g). . *M. niloticus* sp. n.
– All metatibial peg-like setae grouped in a field (Fig. 65e). . . . . *M. watutsi* sp. n.
21 Metatibial peg-like setae grouped in area exceeding half of tibial length (Fig. 14g). . . . . *M. congoensis* Cameron
– Metatibial peg-like setae grouped on area smaller than half of tibial length (Fig. 7d). 22
22 Internal sac of aedeagus with strongly sclerotized tooth-like structures. (Fig. 7a). . . . . *M. bantu* sp. n.
– Internal sac of aedeagus lacking strongly sclerotized tooth-like structures (Fig. 25b). . . . . *M. hutu* sp. n.
23 Metatrochanter lacking peg-like setae. 24
– Metatrochanter bearing peg-like setae. 27
24 Eighth abdominal sternite 4.5-7.0x as long as its median projection *M. twa* sp. n.
– Eighth abdominal sternite 2.0-4.0x as long as its median projection. 25
25 Mesotrochanteral peg-like setae arranged in a single row. 26
– Mesotrochanteral peg-like setae arranged in a double row. . . . . *M. clarkei* sp. n.
26 All metatibial peg-like setae arranged in a single row (Fig. 43d). *M. negus* sp. n.
– Some metatibial peg-like setae grouped in a field. . . . . *M. simienensis* Fagel
27 Mesotrochanteral peg-like setae arranged in a single row. 28
– Mesotrochanteral peg-like setae arranged in a double row or grouped in a field 31
28 Mesotibia broader in middle than near tip (Fig. 69c). 30
– Mesotibia slender, near tip about as broad as in middle (Fig. 67c). 29
29 Apex of 8th abdominal tergite truncate (Fig. 51f). . . . . *M. ras* sp. n.
– Apex of 8th abdominal tergite pointed (Fig. 18e). . . . . *M. falasha* sp. n.
30 Aedeagal median lobe, in lateral view, with apical portion slender, near tip somewhat narrower than in middle (Fig. 69b). . . . . *M. zulu* sp. n.
– Aedeagal median lobe, in lateral view, with apical portion wide at base and evenly tapering (Fig. 42d). . . . . *M. nanus* sp. n.

31 Mesotrochanteral peg-like setae arranged in a double row. . . *M. wittei* Cameron
– Mesotrochanteral peg-like setae grouped in a field. 32
32 Ventral outline of apical portion of aedeagal median lobe straight to ventrally recurved tip (Fig. 34b). . . . . *M. merabet* sp. n.
– Ventral outline of apical portion of aedeagal median lobe sinuate (Fig. 32b). . . . . *M. maniwaata* sp. n.

KEY TO FEMALES

(not included are *M. africanus*, *M. kamerunensis*, *M. nanus*, *M. panga* and *M. ras* in which only males are known)

1 Eighth abdominal tergite lacking medioapical projection (Fig 10f). 2
– Eighth abdominal tergite bearing a medioapical projection (Fig. 33g). 7
2 Inner apical angle of elyton projecting conspicuously (Fig. 10b). 3
– Inner apical angle of elytron not projecting (Fig. 30g). 5
3 Mediodorsal suture of 9th abdominal sternite arcuate (Fig. 11b) . . . . . *M. basilewskyi* Fagel
– Mediodorsal suture of 9th abdominal sternite angulate (Fig. 22b). 4
4 Eighth abdominal sternite 4.5-4.6x as wide as its median projection (Fig. 31i). . . . . *M. major* sp. n.
– Eighth abdominal sternite 3.0-3.5x as wide as its median projection (Fig. 21e). . . . . *M. gigas* Fagel
5 Eighth abdominal sternite 2.2-2.3x as long as width of its median projection (Fig. 55e). . . . . *M. selenitus* sp.n.
– Eighth abdominal sternite 1.7-1.9x as long as width of its median projection (Fig. 39f). 6
6 Antenna about 2.2x as long as pronotum. . . . . *M. spinosus* sp. n.
– Antenna about 2.6x as long as pronotum. . . . . *M. mukankuudiyeorum* sp. n.
7 Apical margin of 8th abdominal sternite sinuate (Fig. 37b). 8
– Apical margin of 8th abdominal sternite straight or arcuate (Fig. 4c). 9
8 Dorsobasal edge of coxites V-shaped (Fig. 30c). . . . . *M. mahnerti* sp. n.
– Dorsobasal edge of coxites U-shaped (Fig. 37f). . . . . *M. monticola* Cameron
9 Eighth abdominal tergite 1.8-2.5x as long as its medioapical projection. 10
– Eighth abdominal tergite 3.2-10.0x as long as its medioapical projection. 11
10 Eighth abdominal tergite about 2.5x as long as its medioapical projection (Fig. 4f). . . . . *M. abessinus* Bernhauer
– Eighth abdominal tergite about 1.8 as long as its medioapical projection (Fig. 28b). . . . . *M. magnicaudatus* sp. n.
11 Antennomere 4 strongly asymmetrical (Fig. 48d). 12
– Antennomere 4 symmetrical or slightly asymmetrical (Fig. 44f). 14
12 Protrochanter with a transverse ridge. . . . . *M. zulu* sp.n.
– Protrochanter without a transverse ridge. 13
13 Elytron deeply depressed along lateral edge. . . . . *M. ovalis* Cameron
– Elytron flat along lateral edge. . . . . *M. twa* sp. n.

14 Eighth abdominal tergite 10.0x as long as its medioapical projection. 15
– Eighth abdominal tergite 3.2-7.0x as long as its medioapical projection. 17
15 Pronotum flat along apical portion of lateral edge. . . . . *M. merabet* sp. n.
– Pronotum depressed along entire lateral edge. 16
16 Dorsobasal edge of coxites V-shaped (Fig. 19e). . . . . *M. falasha* sp. n.
– Dorsobasal edge of coxites U-shaped (Fig. 68b). . . . . *M. wittei* Cameron
17 Head not widened behind the eyes (Fig. 2h). 18
– Head widened behind the eyes (Fig. 2k). 26
18 Body 1.8-2.0 mm long. . . . . *M. dominicae* sp. n.
– Body 0.9-1.7 mm long. 19
19 Eye, in frontal view, with highest point reaching the level of the vertex. 20
– Eye, in frontal view, with highest point below the level of the vertex. 22
20 Tip of scutellum pointed (Fig. 2b). . . . . *M. horticola* sp. n.
– Tip of scutellum rounded (Fig. 2e). 21
21 Dorsobasal edge of coxites V-shaped (Fig. 41c). . . . . *M. mwami* sp. n.
– Dorsobasal edge of coxites transverse, except for median portion pointed (Fig. 33a). . . . . *M. maniwaata* sp. n.
22 Scutellar tip rounded (Fig. 2c). 23
– Scutellar tip pointed (Fig. 2a). 24
23 Dorsobasal edge of coxites V-shaped (Fig. 54d). . . . . *M. scotti* sp. n.
– Dorsobasal edge of coxites transverse (Fig. 13d). . . . . *M. clarkei* sp. n.
24 Antennomere 5 shorter than antennomere 4 (Fig. 52c). . . . . *M. rougemonti* sp. n.
– Antennomere 5 as long as antennomere 4 (Fig. 44f). 25
25 Elytron 1.6-1.7x as long as wide. . . . . *M. negus* sp. n.
– Elytron 1.8-2.0x as long as wide. . . . . *M. simienensis* Fagel
26 Median metasternal ridge conspicuous. 27
– Median metasternal ridge fine or absent. 28
27 Eighth abdominal tergite with medioapical projection longer than wide (Fig. 6e). . . . . *M. apicicornis* Cameron
– Eighth abdominal tergite with medioapical projection wider than long (Fig. 64e). . . . . *M. vanschuytbroecki* sp. n.
28 Tip of 8th abdominal tergite pointed (Fig. 8g). 29
– Tip of 8th abdominal tergite rounded (Fig. 46a). 31
29 Eighth abdominal tergite, in lateral view, with apical projection of flat (Fig. 8e). . . . . *M. bantu* sp. n.
– Eighth abdominal tergite, in lateral view, with apical projection raised, horn-like (Fig. 26d). 30
30 Eighth abdominal tergite, in lateral view, with apical projection slightly raised (Fig. 26d). . . . . *M. hutu* sp. n.
– Eighth abdominal tergite, in lateral view, with apical projection strongly raised (Fig. 15b). . . . . *M. congoensis* Cameron
31 Dorsobasal edge of coxites V-shaped (Fig. 66a). . . . . *M. watutsi* sp. n.
– Dorsobasal edge of coxites U-shaped (Fig. 46c). 32
32 Eighth abdominal tergite 5.0x as long as its medioapical projection (Fig. 46a). . . . . *M. niloticus* sp. n.
– Eighth abdominal tergite 4.0x as long as its medioapical projection (Fig. 60g). . . . . *M. stylifer* sp. n.

Megarthrus abessinus Bernhauer (Figs 2a, g, l, 3a-i, 4a-g)

Megarthrus abessinus Bernhauer, 1931: 566.
Megarthrus abessinicus; Bernhauer, 1942: 349 (incorrect spelling).

Type material. Lectotype ♀: Ethiopia, Djem-Djem Forest (= Shewa prov., Jem Jem?), c.2700m, 24.ix.1926 (H. Scott) BMNH, by present designation.

Additional material (18): Ethiopia, Kefa prov., Foja, Mt. Bor, 2950m, iii.1971 (R. O. S. Clarke) 1♂ in BMNH; Gonder (= Simên) prov., Arghine, c. 3500m or higher, 24.xi.1952 (H. Scott) ex roots of tufted grass in ravine, 1♀ in BMNH (mislabelled paratype of *M. simienensis*); Lori, c. 3500m or higher, 27.xi.1952 (H. Scott) in precincts of church, ex tall yellow composite (*Senecio myriocephalus*), 1♀ in BMNH; near Mindigabsa, c. 3500m, 29.xii.1952 (H. Scott) 7♂, 1♀ in BMNH (mislabelled paratypes of *M. simienensis*); Shewa prov., Addis Abeba, 1971 (G. de Rougemont) 4♀ in BMNH and 1♂, 2♀ in MHNG.

Distribution. Ethiopia.

Description. Length 1.55-1.65 mm; width 1.05-1.15 mm. Head and metasternum dark brown; antenna, pronotum, elytron and abdomen yellow-brown or reddish-brown, except for antennomeres 1-4 paler and sutural margin of elytron darkened; mouth parts and legs paler than metasternum. Dorsal pubescence fairly uniform, on abdomen shorter, on humeral area of elytron denser. Metasternal setae becoming sparser medianly, shorter than prosternal setae. Pubescence of abdominal sternites 4-7 uniform, except for a pair of long setae near medioapical margins. Puncturation fine on anterior portion of hypomeron; medioposterior portion of metasternum impunctate. Frons on level with vertex. Anterior frontal edge not carinate, evenly convex. Entire frontal impression shallow or indistinct. Eye moderatly convex, with highest point below level of vertex. Temple as in Fig. 2g. Submentum flat. Antenna (Fig. 4g) without patches of sensilla; antennomeres 3 and 4 slightly asymmetrical. Pronotal disc (Fig. 4a) flat along lateral edge, shallowly depressed along median groove, latter shallow, parallel-sided. Anterior prosternal margin bordered by an irregular row of fine longitudinal ridges. Protrochanter without transverse ridge. Lateral portion of prepectal ridge straight. Scutellum as in Fig. 2a. Elytron not narrowed at base; base gradually inclined, overhanging. Elytral disc flat along lateral edge, latter straight in dorsal view; apical margin convex near suture; inner apical angle obtuse. Median metasternal ridge fine, low. Abdominal tergite 3 slightly vaulted transversally. Sternites 2 and 3 with median processes as in Fig. 2l. Sternite 4 flat at base, then slightly vaulted transversally.

Ratios: AL 2.5; EL 1.5; ET 1.65; EW 1.2; EY 2.8-2.9; GT 2.0; GW 1.8; HW 2.0; ML 1.4; MP 1.7; PT 2.0; SP 3.3-3.4; TPF 2.5.

♂. Protarsal segment 1 bearing adhesive setae (Fig. 3d). Mesofemur (Fig. 3g) as long as metafemur (Fig. 3h). Mesotibia (Fig. 3e) shorter than metatibia (Fig. 3f). Protibia (Fig. 3d) with one or two peg-like setae. Peg-like setae on mesotrochanter (Fig. 3g) and mesotibia arranged in a single row, on metatibia arranged in a double row, and grouped in a field on metatrochanter (Fig. 3h). Apex of abdominal tergite 8 as in Fig. 3i. Sternite 8 as in Fig. 3c. Aedeagus as in Fig. 3a, b.

♀. Abdominal tergite 8 (Fig. 4e, f) with medioapical projection. Sternite 8 as in Fig. 4c. Genital segment as in Fig. 4b, d.

Comments. The remaining paralectotypes examined are not conspecific; see under *M. falasha* and *M. rougemonti*. This species may be easily distinguished by the

coloration, the elytral base not narrowed and the sexual characters. It resembles *M. magnicaudatus*, but has the number of protibial peg-like setae in male strongly reduced and a much shorter apical projection of the abdominal tergite 8 in female.

Megarthrus africanus Eichelbaum (Figs 2f, i, n, 5a-h)

Megarthrus africanus EICHELBAUM, 1913: 114.

Type material. Lectotype ♂: Tanzania, Tanga distr., E Usambara Range, Mt. Bomole, Amani, 11.x.1903 (F. Eichelbaum) ZMHB, by present designation.

Distribution. Tanzania: Usambara Range.

Description. Length 1.45 mm; width 1.0 mm. Body predominantly red-brown, with darkened head and sutural margin of elytron, and paler legs, mouth parts and antennomere 11. Dorsal pubescence fairly uniform, on abdomen shorter, sparser near lateral pronotal edge, and denser along sutural margin and on humeral areal. Metasternal setae becoming denser medianly, about as long as prosternal setae. Pubescence on abdominal sternites 4-7 becoming denser medianly. Puncturation coarse on anterior portion of hypomeron and on medioposterior portion of metasternum. Frons on level with or raised above level of vertex. Anterior frontal edge finely and evenly carinate, weakly convex in middle and oblique laterally. Entire frontal impression deep. Eye almost hemispherical, with highest point reaching level of vertex. Temple as in Fig. 2i. Submentum flat. Antenna (Fig. 5c) without patches of sensilla; antennomeres 3 and 4 symmetrical. Pronotal disc (Fig. 5a) shallowly depressed along entire lateral edge and flat along median groove; latter deep, parallel-sided. Anterior prosternal margin bordered by a regular row of conspicuous longitudinal ridges. Protrochanter without transverse ridge. Lateral portion of prepectal ridge sinuate. Scutellum as in Fig. 2f. Elytron not narrowed at base; base abruptly inclined, overhanging. Elytral disc flat along lateral edge; latter straight in dorsal view; apical margin convex near suture; inner apical angle obtuse. Metasternal median ridge absent. Abdominal tergite 3 strongly vaulted transversally. Abdominal sternites 2 and 3 with processes as in Fig. 2n. Sternite 4 flat at base, then strongly vaulted transversally.

Ratios: AL 2.6; EL 1.5; ET 1.8; EW 1.15; EY 2.85; GT 2.25; GW 1.8; HW 1.6-1.7; ML 1.5; MP 2.0; PT 1.9; SP 3.3.

♂. Protarsal segment 1 lacking adhesive setae. Mesofemur as long as metafemur. Mesotibia (Fig. 5b) shorter than metatibia. Peg-like setae grouped in a field on mesotrochanter (Fig. 5h) and mesotibia, absent from protibia, metatrochanter and metatibia. Apex of abdominal tergite 8 as in Fig. 5g. Sternite 8 as in Fig. 5d. Aedeagus as in Fig. 5e, f.

♀. Unknown.

Comments. Although the shape of the anterior portion of the frons is probably a male sexual character, in the absence of females it is listed among the general characters. This species share with *M. mukankundiyeorum*, *M. selenitus* and *M. spinosus* a regularly ridged prosternal margin. It is characterised by the presence of a symmetrical aedeagus in combination with the absence of protarsal adhesive setae.

Megarthrus apicicornis Cameron (Fig. 6a-g)

Megarthrus apicornis; CAMERON, 1950: 5 (incorrect spelling).
Megarthrus apicicornis CAMERON, 1950: 6.

Type material. Holotype ♀: Zaire, Kivu prov. (Albert NP) V. Mikeno, near Rweru, 2400m, 3.vii.1934 (G. F. de Witte) ex bamboo, #469, MRAC.

Distribution. Zaire: V. Mikeno.

Description. Length 1.55 mm; width 1.0 mm. Body uniformly red-brown or dark brown, except for paler legs, mouth parts and antennomeres 10 and 11, and somewhat darkened head and sutural margin of elytron. Dorsal pubescence fairly uniform, elytral sparser on disc and denser on humeral area. Metasternal setae becoming sparser medioposteriorly and longer anteriorly, shorter than prosternal setae. Pubescence of abdominal sternites 4-7 uniform, except for a pair of long setae near medioapical margins. Puncturation fine on anterior portion of hypomeron; median area of metasternum impunctate. Frons raised above level of vertex. Anterior frontal edge not carinate, strongly arcuate in middle, oblique laterally. Frontal impression indistinct in middle and shallow laterally. Eye moderatly convex, with highest point below level of vertex. Temple similar to that in Fig. 2k. Submentum weekly convex. Antenna (Fig. 6c) without patches of sensilla; antennomeres 3 and 4 slightly asymmetrical. Pronotal disc (Fig. 6f) shallowly depressed along basal portion of lateral edge and deeply depressed along median groove; latter deep, parallel-sided. Anterior prosternal margin not bordered by longitudinal ridges. Protrochanter without transverse ridge. Lateral portion of prepectal ridge straight. Scutellum similar to that in Fig. 2d. Elytron not narrowed at base; base gradually inclined, overhanging. Elytral disc flat along lateral edge; latter straight in dorsal view; apical margin slightly sinuate near suture; inner apical angle right-angled. Metasternal median ridge large, conspicuous. Abdominal tergite 3 slightly vaulted transversally. Sternites 2 and 3 with median processes similar to that in Fig. 2l. Sternite 4 flat at base, then slightly vaulted transversally.

Ratios: AL 2.1; EL 1.5; ET 1.7; EW 1.2; EY 2.8-2.9; GT 2.0; GW 2.0; HW 1.6-1.7; ML 1.5; MP 1.7; PT 1.8; SP 3.7; TPF 4.0.

♀. Medioapical projection of abdominal tergite 8 as in Fig. 6e, g. Sternite 8 as in Fig. 6d. Genital segment as in Fig. 6a, b.

♂. Unknown.

Comments. Nine species (*M. apicicornis*, *M. bantu*, *M. congoensis*, *M. hutu*, *M. niloticus*, *M. panga*, *M. stylifer*, *M. vanschuytbroecki* and *M. watutsi*) possess a head distinctly widened behind the eyes. Among these species, *M. apicicornis* is distinguished by its conspicuous metasternal median ridge and elongate, narrow apical projection of abdominal tergite 8. The former character is shared with *M. vanschuytbroecki*, which has the tergal projection much wider.

Megarthrus bantu sp. n. (Figs 7a-i, 8a-g)

Type material. Holotype ♂: Zaire, Ruwenzori Range (Albert NP) Kalonge, river Nyamwamba, tributary of Butahu, 2010m, 2-3.ii.1953 (P. Vanschuytbroeck & J. Kekenbosch) #2214-21, MRAC.

Paratypes (85): same data as holotype, 5♂, 5♀in MHNG and 29♂, 19♀ in MRAC; Zaire, Ruwenzori Range (Albert NP) Kalonge, 2210m, 1.ix.1952 (P. Vanschuytbroeck & J. Kekenbosch) #846-51, 1♂ in MRAC; same data, but 7.viii.1952, ex humus in forest, #695, 1♀ in MRAC; Kalonge (Albert NP) Nyamwamba-Ihongero, 2480m, 25-29.viii.1952 (P. Vanschuytbroeck & J. Kekenbosch) ex humus in bamboo, #860-63, 1♂ in MRAC; same data, but 26-28.viii.1952, #874, 1♂ in MRAC; Kalonge (Albert NP) river Katauleko, tributary of Butahu, 2180m, 1.viii.1952 (P. Vanschuytbroeck & J. Kekenbosch) ex humus, #615, 1♂, 1♀ in MRAC; same data, but 1-2.viii.1952, #665-67, 1♂ in MRAC; Kalonge (Albert NP) river Katsambu, tributary of Butahu, 2000m, 26.i-19.ii.1953 (P. Vanschuytbroeck & J. Kekenbosch) #2155-2200, 1♀ in MRAC; Kalonge (Albert NP) river Kiondyo ya Kwnanza, tributary of Butahu, 2130m, 2.viii.1952 (P. Vanschuytbroeck & J. Kekenbosch) ex humus, #634-35, 1♂, 1♀ in MHNG and 1♂, 2♀ in MRAC; same data, but 5.viii.1952, under bark, #657, 1♀ in MRAC; Ruwenzori Range (Albert NP) Kyandolire, river Mulaku, tributary of Kakalari, 1750m, 14.x.1952 (P. Vanschuytbroeck & J. Kekenbosch) ex humus, #1241-43, 1♂, 2♀ in MHNG and 3♂, 4♀ in MRAC; Kivu, 39km S Lubero, Mombassa, 25.viii.1932 (L. Burgeon) R. Det. L2556, 1♂ in MRAC; Burundi, Bururi terr., Nyamurenbe, 900m, 7.iii.1953 (P. Basilewsky) 1♂ in MRAC; Uganda, Ruwenzori Range, Toro prov., Mahoma River, 2700m, 13-16.viii.1952 (D. S. Fletcher) 1♂ in BMNH.

Distribution. Burundi, Uganda and Zaïre.

Description. Similar to *M. congoensis* from which it may be distinguished as follows: Length 1.3-1.6 mm; width 0.85-1.05 mm. Antenna reddish-brown, antennomere 11 paler. Eye strongly convex. Antenna as in Fig. 8c. Pronotum as in Fig. 8f. Elytral disc shallowly depressed along lateral edge; apical contour somewhat convex near suture; inner apical angle obtuse. Metasternal median ridge fine, low. Abdominal tergite 3 almost flat. Ratios: AL 2.0-2.2; EL 1.5; ET 1.65-1.80; EY 2.8-2.9; GW 1.8; ML 1.4; SP 2.5-2.9; TPF 5.0-6.8.

♂. Protarsal segment 1 bearing adhesive setae. Mesofemur (Fig. 7g) longer than metafemur (Fig. 7h). Mesotibia (Fig. 7c) shorter than metatibia (Fig. 7d). Peg-like setae arranged in a double row on mesotrochanter (Fig. 7g), grouped in a field on mesotibia, metatrochanter (Fig. 7h) and metatibia, absent from protibia. Apex of abdominal tergite 8 as in Fig. 7e, i. Aedeagus as in Fig. 7a, b.

♀. Medioapical projection of abdominal tergite 8 as in Fig. 8e, g. Sternite 8 as in Fig. 8d. Genital segment as in Fig. 8a, b.

Comments. Megarthrus bantu differs from other species with the head widened behind the eyes (see discussion under *M. apicicornis*) by the strongly sclerotised tooth-like structures of the aedeagal internal sac and by the contour of the female abdominal tergite 8.

Megarthrus basilewskyi Fagel (Figs 9a-g, 10a-g, 11a-e)

Megarthrus basilewskyi Fagel, 1957: 27.

Type material. Holotype ♂: Rwanda, Kibuye terr., Yanina, 2300m, 12.ii.1953 (P. Basilewsky) MRAC.

Paratypes (4♀): Zaire, Kivu prov., Mwenga terr., Luiko, 2050m, 21.i.1952 (N. Leleup) ex humus in montane forest, 1 in MHNG and 3 in MRAC.

Distribution. Rwanda; Zaire: Kivu.

Description. Similar to *M. gigas* from which it may be distinguished as follows: Length 1.9 mm; width 1.4 mm. Body red-brown. Metasternal median ridge absent. Ratios: EL 1.6; ET 1.8; EY 2.5; GT 2.0; GW 2.0; TPF abs.

♂. Inner apical angle of elytron right-angled. Protarsal segment 1 lacking adhesive setae. Mesofemur (Fig. 9c) shorter than metafemur (Fig. 9a). Mesotibia (Fig. 9f) shorter than metatibia (Fig. 9e). Peg-like setae arranged in a single row on protibia (Fig. 9g) and mesotrochanter (Fig. 9c); grouped in a field on mesotibia, metatrochanter (Fig. 9a) and metatibia. Abdominal tergite 8 as in Fig 10d, e. Sternite 8 as in Fig. 11e. Aedeagus as in Fig. 9b, d.

♀. Apical contour of elytron as in Fig. 10b. Abdominal tergite 8 (Fig. 10f, g) without medioapical projection. Sternite 8 as in Fig. 11d. Genital segment as in Fig. 11a-c; mediodorsal suture of sternite 9 arcuate.

Comments. Megarthrus basilewskyi, *M. dominicae*, *M. gigas* and *M. major* may be distinguished by their large size. *Megarthrus basilewskyi* is characterised by the shape of the aedeagus and, in the female, the tergite 8 lacking apical projection in combination with the presence of the arcuate mediodorsal suture of the sternite 9.

Megarthrus clarkei sp. n. (Figs 2c, 12a-h, 13a-g)

Type material. Holotype ♂: Ethiopia, Shewa prov., Addis Abeba, 1971 (G. de Rougemont) BMNH.

Paratypes (10): same data as holotype, 2♂, 3♀ in BMNH and 2♂, 2♀ in MHNG; Shewa prov., Managasha Forest, c. 2900m, 9.i.1971 (R. O. S. Clarke) ex silt of dry stream bed, 1♀ in BMNH.

Distribution. Central Ethiopia.

Description. Length 1.45-1.60 mm; width 1.0-1.1 mm. Body red-brown or dark brown, with darkened head, metasternum and abdomen, and paler legs, mouth parts and antennomeres 1-4. Dorsal pubescence fairly uniform, becoming denser along median pronotal groove and near apical margin of abdominal tergite 7. Metasternal setae becoming sparser on median area; shorter than those on prosternum. Pubescence of abdominal sternites 4-7 uniform, except for a pair of long setae near medioapical margins. Puncturation fine on anterior portion of hypomeron; median area of metasternum impunctate. Frons raised above level of vertex. Anterior frontal edge not carinate, evenly arcuate. Entire frontal impression shallow. Eye strongly convex, with highest point below level of vertex. Temple similar to that in Fig. 2g. Submentum weakly convex. Antenna (Fig. 13b) without patches of sensilla; antennomeres 3 and 4 slightly asymmetrical. Pronotal disc (Fig. 13a) shallowly depressed along entire lateral edge and along median groove; latter usually deep, parallel-sided. Anterior prosternal margin not bordered by longitudinal ridges. Protrochanter without transverse ridge. Lateral portion of prepectal ridge straight. Scutellum as in Fig. 2c. Elytron abruptly narrowed at base; base gradually inclined, overhanging. Elytral disc shallowly depressed along lateral edge; latter slightly convex in dorsal view; apical margin somewhat sinuate near suture; inner apical angle obtuse. Metasternal median ridge fine, low. Abdominal tergite 3 almost flat. Sternites 2 and 3 with median processes similar to that in Fig. 2l. Sternite 4 flat at base, then slightly vaulted transversally.

Ratios: AL 2.0-2.1; EL 1.4; ET 1.5; EW 1.2; EY 2.8-2.9; GT 2.2; GW 1.8; HW 1.6-1.7; ML 1.4; MP 1.7; PT 1.9; SP♂ 2.5; SP♀ 3.4-3.9; TPF 4.0.

♂. Protarsal segment 1 bearing adhesive setae. Mesofemur (Fig. 12e) shorter than metafemur. Mesotibia (Fig. 12c) shorter than metatibia (Fig. 12d), with peg-like setae arranged in a single row, and grouped in a field near apex. Peg-like setae on metatibia arranged in a single row, and in a double row near apex; forming a double row on mesotrochanter (Fig. 12e); absent from protibia and metatrochanter. Apex of abdominal tergite 8 as in Fig. 12f, g. Sternite 8 as in Fig. 12g. Aedeagus as in Fig. 12a, b.

♀. Medioapical projection of abdominal tergite 8 as in Fig. 13c, f. Sternite 8 as in Fig. 13g. Genital segment as in Fig. 13d, e.

Comments. Megarthrus clarkei and *M. scotti* may be distinguished from other African congeners by the scutellar shape. The shape of the female abdominal tergite 8 is diagnostic for each of these two species.

The species is dedicated to one of the collectors, Mr. Robin O. S. Clarke.

Megarthrus congoensis Cameron (Figs 2d, k, 14a-i, 15a-g)

Megarthrus congoensis CAMERON, 1950: 4.

Type material. Holotype ♀: Rwanda, V. Visoke (Albert NP) Bishoke, 2800-3300m, 13-14.ii.1935 (G. F. de Witte) #1128, MRAC.

Paratypes (13): same data as holotype, 1♀ in MRAC; same data, but #1125, 3♀ in BMNH; same data, but #1127, 1♂ in MHNG and 1♀ in MRAC; same data, but #1129, 1♂, 1♀ in BMNH, 1♀ in MHNG and 2♂, 2♀ in MRAC.

Additional material (1♀): Rwanda (Albert NP) at foot of V. Karisimbi, Ilega, 2400m, 12.iii.1935 (G. F. de Witte) #1314, MRAC (paratype of *M. apicicornis*).

Distribution. Rwanda: V. Visoke and V. Karisimbi.

Description. Length 1.65-1.75 mm; width 0.95-1.05 mm. Body red-brown or dark brown, with darkened head, sutural margin of elytron, metasternum and abdomen, and paler legs, mouth parts and antennomeres 1-4. Dorsal pubescence fairly uniform; that on elytron sparser, but becoming denser on humeral area. Pubescence denser near posterior margin of abdominal tergite 7. Metasternal setae becoming sparser mediposteriorly and longer anteriorly; shorter than those on prosternum. Pubescence of abdominal sternites 4-7 uniform, except for a pair of long setae near medioapical margins. Puncturation fine on anterior portion of hypomeron; median area of metasternum impunctate. Frons raised above level of vertex. Anterior frontal edge not carinate, evenly arcuate. Entire frontal impression shallow. Eye moderatly convex, with highest point below level of vertex. Temple similar to that in Fig. 2k. Submentum weakly convex. Antenna (Fig. 15a) without patches of sensilla; antennomeres 3 and 4 slightly asymmetrical. Pronotal disc (Fig. 15c) shallowly depressed along basal portion of lateral edge and deeply depressed along median groove; latter shallow, parallel-sided. Anterior prosternal margin bordered by an irregular row of fine longitudinal ridges. Protrochanter without transverse ridge. Lateral portion of prepectal ridge straight. Scutellum as in Fig. 2d. Elytron not narrowed at base; base gradually inclined, overhanging. Elytral disc flat along lateral edge; latter straight in dorsal view; apical margin straight or convex near suture. Metasternal median ridge absent. Abdominal tergite 3 slightly vaulted transversally. Sternites 2 and 3 with median processes as in Fig. 2l. Sernite 4 flat at base, then slightly vaulted transversally.

Ratios: AL 1.9-2.0; EL♂ 1.5; EL♀ 1.9; ET 1.7-1.8; EW 1.2; EY 3.3-3.4; GT 2.0; GW 2.0; HW 1.6-1.7; ML 1.5-1.6; MP 1.7; PT 1.8; SP♂ 2.5-2.7; SP♀ 3.2-3.4; TPF 4.0.

♂. Inner apical angle of elytron obtuse. Protarsal segment 1 bearing adhesive setae. Mesofemur (Fig. 14h) as long as metafemur (Fig. 14i). Mesotibia (Fig. 14f) shorter than metatibia (Fig. 14g). Peg-like setae grouped in a field on mesotrochanter (Fig. 14h), mesotibia, metatrochanter (Fig. 14i) and metatibia; absent from protibia. Apex of abdominal tergite 8 as in Fig. 14a, e. Sternite 8 as in Fig. 14b . Aedeagus as in Fig. 14c, d.

♀. Inner apical angle of elytron right-angled. Medioapical projection of abdominal tergite 8 as in Fig. 15b, e. Sternite 8 as in Fig. 15g. Genital segment as in Fig. 15d, f.

Comments. Megarthrus congoensis differs from other species with the head widened behind the eyes (see discussion under *M. apicicornis*), *M. hutu* excepted, by the shape of the male and female abdominal tergite 8. It may be distinguished from *M. hutu* by the aedeagal shape and, in female, by the ratio of the elytral / pronotal lengths.

Megarthrus dominicae sp. n. (Figs 16a-i, 17a-f)

Type material. Holotype ♂: Uganda, Toro prov., Ruwenzori NP, John Mate Camp, 3350m, 14-15.v.1993 (G. Cuccodoro & D. Erne) ex decaying stems of giant *Lobelia*, MHNG.

Paratypes (10): same data as holotype, 1♂, 1♀ in BMNH, 3♂, 3♀ in MHNG and 1♂, 1♀ in MRAC.

Distribution. Uganda: Ruwenzori Range.

Description. Length 1.8-2.0 mm; width 1.1-1.3 mm. Head, metasternum and abdomen blackish; pronotum and elytron dark brown; sutural margin of elytron darkened; mouth parts and legs yellowish; antenna dark brown, antennomeres 1-4 somewhat paler. Dorsal pubescence fairly uniform; longer and denser along pronotal median groove and becoming longer and denser on humeral area of elytron; denser near posterior margin of abdominal tergite 7. Metasternal setae shorter than those on prosternum, becoming sparser medioposteriorly and longer anteriorly. Pubescence on abdominal sternites 4-7 uniform, except for a pair of long setae near medioapical margins. Anterior portion of hypomeron and median area of metasternum impunctate. Frons raised above level of vertex. Anterior frontal edge not carinate, evenly arcuate. Frontal impression indistinct in middle and shallow laterally. Eye moderatly convex, with highest point below level of vertex. Temple similar to that in Fig. 2g. Submentum convex. Antenna (Fig. 16a) without patches of sensilla; antennomeres 3 and 4 slightly asymmetrical. Pronotal disc (Fig. 17a) flat along lateral edge, shallowly depressed along median groove; latter shallow, widened at base. Anterior prosternal margin bordered by an irregular row of fine longitudinal ridges. Protrochanter without transverse ridge. Lateral portion of prepectal ridge straight. Scutellum similar to that in Fig. 2b. Elytron abruptly narrowed at base; base abruptly inclined, overhanging. Elytral disc deeply depressed along lateral edge; latter slightly convex in dorsal view; apical margin straight or arcuate near suture; inner apical angle obtuse. Metasternal median ridge fine,

low. Abdominal tergite 3 flat. Sternites 2 and 3 with median processes as in Fig. 2l. Sternite 4 flat at base, then slightly vaulted transversally.

Ratios: AL 2.0; EL 1.8; ET 1.8; EW 1.2; EY 3.3-3.4; GT 2.2; GW 1.6-1.7; HW 1.6-1.7; ML 1.5; MP 1.8; PT 2.0; SP 2.5; TPF 5.0.

♂. Apical contour of elytron convex near suture. Protarsal segment 1 bearing adhesive setae. Mesofemur (Fig. 16e) longer than metafemur. Mesotibia (Fig. 16d) longer than metatibia. Peg-like setae arranged in a double row on mesotibia and metatrochanter (Fig. 16g), grouped in a field on mesotrochanter (Fig. 16e), absent from protibia and metatibia. Apex of abdominal tergite 8 as in Fig. 16f, h. Sternite 8 as in Fig. 16i. Aedeagus as in Fig. 16b, c.

♀. Apical contour of elytron somewhat sinuate near suture. Medioapical projection of abdominal tergite 8 as in Fig. 17b, c. Sternite 8 as in Fig. 17f. Genital segment as in Fig. 17d, e.

Comments. Megarthrus dominicae may be distiguished easily of the others species of similar size (see discussion under *M. basilewskyi*) by its uniformly dark colour and impunctate prothoracic hypomera.

The species is dedicated to Mrs Dominique Cuccodoro.

Megarthrus falasha sp. n. (Figs 2d,k, 18a-i, 19a-g)

Type material. Holotype ♂: Ethiopia, Gojam prov., 8km W Falega, Birham <10°46'N; 38°03'E> 2820m, xi.1972 (R. O. S. Clarke) BMNH.

Paratypes (7): same data as holotype, 1♀ in BMNH; Jimma (= Kefa prov., Jïma?) vi.1971 (R. O. S. Clarke) ex grass cuttings, 2♀ in BMNH and 1♀ in MHNG; Shewa prov., Addis Abeba, 1971 (G. de Rougemont) 1♂, 1♀ in MHNG; Mt. Zuquála (=Mt. Ziq'wala), in crater, c. 2700m, 26.x.1926 (J. Omer-Cooper) box 77, 1 ♀ in FMNH (paralectotype of *M. abessinus* Bernhauer).

Distribution. Central Ethiopia.

Description. Similar to *M. wittei* from which it may be distinguished as follows: Frons raised above level of vertex. Antenna as in Fig. 19a. Anterior prosternal margin not bordered by longitudinal ridges. Elytron with lateral contour somewhat convex and apical contour straight near suture. Ratios: AL 1.9; EL 1.45; ET 1.45-1.55; EY 2.8-2.9; GW 1.6-1.7; HW 1.6-1.7; ML 1.4; PT 1.9; SP♂ 2.8-2.9; SP♀ 3.3-3.4; TPF 10.0.

♂. Protarsal segment 1 bearing adhesive setae. Mesofemur (Fig. 18f) somewhat shorter than metafemur. Mesotibia (Fig. 18c) shorter than metatibia (Fig. 18d). Metatrochanter (Fig. 18h) bearing 1-3 peg-like setae. Peg-like setae on mesotibia arranged in a single row, and in a double row near apex; arranged in a single row on mesotrochanter (Fig. 18f) and metatibia; absent from protibia. Apex of abdominal tergite 8 as in Fig. 18e, g. Sternite 8 as in Fig. 18i. Aedeagus as in Fig. 18a, b.

♀. Medioapical projection of abdominal tergite 8 as in Fig. 19d, f. Sternite 8 as in Fig. 19g. Genital segment as in Fig. 19c, e.

Comments. Megarthrus falasha is one of the seven Afrotropical species (*M. falasha*, *M. nanus*, *M. ovalis*, *M. rougemonti*, *M. twa*, *M. wittei* and *M. zulu*) possessing moniliform antennomeres 7 to 10. It may be distinguished from these species, *M. wittei* excepted, by the almost uniformly brown color of the body in combination with the

aedeagus symmetrical. The pattern of the mesotrochanteral peg-like setae is diagnostic for each of these two species.

Megarthrus gigas Fagel (Figs 2m, 20a-f, 21a-e, 22a-i)

Megarthrus gigas FAGEL, 1957: 29.

Type material. Holotype ♂: Burundi, Ngozi terr., Samutuku, 2600m, 24.ii.1953 (P. Basilewsky) MRAC.

Paratypes (2♀): Zaire, Kivu prov., Kabare terr., foothills SE Kahuzi, 2000m, vii.1951 (N. Leleup) ex humus in montane forest, MRAC.

Additional material (2♂): Zaire, Kivu prov., Mwenga terr., Lake Lungwe, 2700m, viii.1953 (N. Leleup) ex humus in forest of bamboo and *Hagenia*, MRAC (mislabelled paratype); Ruwenzori Range (Albert NP) Kalonge, stream Katsambu, tributary of Butahu, 2000m, 27.i-9.ii.1953 (P. Vanschuytbroeck & J. Kekenbosch) #2203-10, MHNG.

Distribution. Burundi; Zaire: Kivu, Ruwenzori Range.

Description. Length 2.0 mm long; width 1.4 mm wide. Body uniformly dark brown, with paler legs, mouth parts and antennomere 11. Dorsal pubescence fairly uniform, becoming sparser on lateral edges of pronotum. Humeral area of elytron with denser pubescence. Metasternal setae becoming denser near median area; about as long as those on prosternum. Pubescence of abdominal sternites 4-7 uniform. Puncturation coarse on anterior portion of hypomeron and on median area of metasternum. Frons on level with vertex. Anterior frontal edge finely carinate, evenly arcuate. Entire frontal impression indistinct. Eye almost hemispherical, raised above level of vertex. Temple similar to that in Fig. 2i. Submentum flat. Antenna (Fig. 21c) without patches of sensilla; antennomeres 3 and 4 symmetrical. Pronotal disc (Fig. 21a) deeply depressed along entire lateral edge, flat along median groove; latter shallow, widened at base. Anterior prosternal margin bordered by an irregular row of fine longitudinal ridges. Protrochanter without transverse ridge. Lateral portion of prepectal ridge sinuate. Scutellum similar to that in Fig. 2f. Elytron abruptly narrowed at base; base abruptly inclined, overhanging. Elytral disc deeply depressed along lateral edge; latter almost straight in dorsal view; apical margin sinuate near suture. Metasternal median ridge fine, low. Abdominal tergite 3 slightly vaulted transversally. Abdominal sternites 2 and 3 with median processes as in Fig. 2m. Sternite 4 flat at base, then slightly vaulted transversally.

Ratios: AL 2.6; EL 1.4; ET 1.6; EW 1.2; EY 2.7-2.8; GT 2.2; GW 1.6-1.7; HW 2.2-2.3; ML 1.4; MP 1.7; PT 2.0; SP 3.0-3.5; TPF abs.

♂. Inner apical angle of elytron right-angled. Protarsal segment 1 (Fig. 22g) lacking adhesive setae. Mesofemur (Fig. 20d) shorter than metafemur (Fig. 20a). Mesotibia (Fig. 22f) shorter than metatibia (Fig. 22e). Peg-like setae arranged in a single row on mesotrochanter (Fig. 20d), metatrochanter (Fig. 20a) and metatibia; grouped in a field on protibia (Fig. 22g) and mesotibia. Apex of abdominal tergite 8 as in Fig. 20e, f. Sternite 8 as in Fig. 21d. Aedeagus as in Fig. 20b, c.

♀. Apical contour of elytron and inner apical angle as in Fig. 21b. Abdominal tergite 8 (Fig. 22h, i) without medioapical projection. Sternite 8 as in Fig. 21d. Genital segment as in Fig. 22a-d; mediodorsal suture of sternite 9 forming an angle not projecting anteriorly.

Comments. *Megarthrus gigas* may be distinguished from other species of similar size (see discussion under *M. basilewskyi*) by the aedeagus lacking a lateral notch. This species shares with *M. major* the angulate median suture of the abdominal sternite 9, but differs by the much wider basal projection of that sternite.

Megarthrus horticola sp. n. (Figs 23a-h, 24a-g)

Type material. Holotype ♂: Uganda, Bugisu prov., Mt. Elgon, Sipi, 1750m, 31.v.1993 (G. Cuccodoro & D. Erne) ex moist leaf litter at foot of tree in banana plantation, MHNG.

Paratypes (8): same data as holotype, 1♀ in BMNH and 1♀ in MHNG; same data, but 1.vi.1993, ex moist vegetational debris in garden, 1♀ in MHNG and 1♀ in MRAC; Kenya, Central prov., Mt. Aberdares, near NP entrance, 2300m, 25.xi.1974, (V. Mahnert & J. -L. Perret) ex leaf litter and rotten wood, 1♂, 1♀ in MHNG; Rift Valley prov., Mau for., between Mau Saummit and Kedowa, near Londiani Rd., 7.xi.1974 (V. Mahnert & J. -L. Perret) under bark and stones, 1♀ in MHNG; Zaire, Kivu prov., Mt. Kahuzi, 2000m, 27.v.1985 (H. Mühle) ex *Lobelia*, 1♂ in ZMHB.

Distribution. Kenya: Mt. Aberdares; Uganda: Mt. Elgon; Zaire: Kivu.

Description. Similar to *M. monticola* from which it may be distinguished as follows: Length 1.35-1.45 mm; width 0.95-1.05 mm. Sutural margin of elytron darker than disc; antenna reddish-brown, antennomere 11 paler. Antenna as in Fig. 24a. Pronotal disc (Fig. 24f) flat along lateral edge. Elytron with apical contour arcuate near suture and inner apical angle obtuse. Abdomen with tergite 3 weakly convex and sternite 4 flat. Ratios: AL 2.2; EL 1.45; EW 1.2; HW 1.6-1.7; TPF 5.0.

♂. Protarsal segment 1 bearing adhesive setae. Mesofemur (Fig. 23f) as long as metafemur. Mesotibia (Fig. 23c) shorter than metatibia. Peg-like setae grouped in field on mesotrochanter (Fig. 23f), mesotibia and metatrochanter (Fig. 23h), absent from protibia and metatibia. Apex of abdominal tergite 8 as in Fig. 23d, e. Sternite 8 as in Fig. 23g. Aedeagus as in Fig. 23a, b.

♀. Medioapical projection of abdominal tergite 8 as in Fig. 24e, g. Sternite 8 as in Fig. 24d. Genital segment as in Fig. 24b, c.

Comments. This species is similar to *M. mahnerti* and *M. monticola*. It may be distinguished easily by the apex of the female sternite 8 truncate and, in the male, by the absence of metatibial peg-like setae.

The water loading behaviour has been reported in this species (*Megarthrus* sp. A in Cuccodoro, 1995).

Megarthrus hutu sp. n. (Figs 25a-h, 26a-h)

Type material. Holotype ♂: Rwanda (Albert NP) V. Visoke, Bishoke, 2800-3300m, 13-14.ii.1935 (G. F. de Witte) #1127, MRAC (paratype of *M. congoensis*).

Paratypes (13): same data as holotype, but #1128, 1♀ in MRAC (paratype of *M. congoensis*); same data, but #1129, 1♂ in MHNG and 2♀ in MRAC (paratypes of *M. congoensis*); at foot of V. Karisimbi (Albert NP) Lake n'Gando, 2400m, 6.iii.1935 (G. F. de Witte) #1243, 1♂ in BMNH (paratype of *M. apicicornis*); same data, but 8.iii.1935, #1216, 1♀ in MRAC (paratype of *M. congoensis*); Zaire, Kivu (Albert NP) Tshiaberimu sect., Kirungu, 2720m, 8-9.iii.1954 (P. Vanschuytbroeck & H. Synave) #7928-31, 1♀ in MHNG.

Distribution. Rwanda; Zaire: Kivu.

Description. Similar to *M. cougoensis* from which it may be distinguished as follows: Length 1.35-1.60 mm; width 0.85-1.00 mm. Elytron with apical contour somewhat convex near suture and inner apical angle obtuse. Abdomen with pubescence uniform and tergite 3 weakly convex. Ratios: EL 1.4-1.5; ET 1.7-1.8; EY 2.8-2.9; GT 2.2; SP♂ 2.5; SP♀ 3.2-3.4; TPF 4.0.

♂. Protarsal segment 1 bearing adhesive setae. Mesofemur (Fig. 25e) as long as metafemur (Fig. 25h). Mesotibia (Fig. 25c) with peg-like setae arranged in a double row; somewhat shorter than metatibia (Fig. 25d). Peg-like setae grouped in a field on metatrochanter (Fig. 25h), mesotrochanter (Fig. 25e) and metatibia, absent from protibia. Apex of abdominal tergite 8 as in Fig. 25f, g. Sternite 8 as in Fig. 26f. Aedeagus as in Fig. 25a, b.

♀. Medioapical projection of abdominal tergite 8 as in Fig. 26b, d. Sternite 8 as in Fig. 26c. Genital segment as in Fig. 26e, g.

Comments. See discussion under *M. cougoensis*.

Megarthrus kamerunensis Bernhauer

Megarthrus kamerunensis Bernhauer, 1942: 348.

Type material. Type: Cameroon, SE Mt. Cameroun, 1800-2000m, 1939 (P. Lepesme, R. Paulian & A. Villiers) ex fungi, FMNH (except for the remains of tarsi, the type specimen is missing and was apparently lost in transit when returned to the FMNH after W. O. Steel's death in October 1969; A. F. Newton Jr., pers. com.).

Distribution. Cameroon: Mt. Cameroon.

Comments. According to the original desciption, *M. kamerunensis* is characterised by a rounded incision of the posterior margin of the male abdominal sternite 6. No material could be assigned to this species.

Megarthrus magnicaudatus sp. n. (Figs 27a-k, 28a-f)

Type material. Holotype ♂: Ethiopia, Balê prov., Adelay Forest, 3100m, 19.xii.1971 (R. O. S. Clarke) ex plant roots in *Juniper* wood, BMNH.

Paratypes (5♀): same data as holotype, 2 in BMNH and 2 in MHNG; Ethiopia, Gamo Gofa prov., Mt. Gughé, 3200-3350m, 20.xii.1948 (H. Scott) ex roots of fern, 1 in BMNH.

Distribution. Central and southern Ethiopia.

Description. Similar to *M. abessinus* from which it may be distinguished as follows: Length 1.6-1.7 mm; width 1.1-1.2 mm. Frons raised above level of vertex. Frontal impression indistinct in middle, shallow laterally. Antenna as in Fig. 28c and pronotum as in Fig. 27i. Ratios: AL 2.0; EL 1.4; ET 1.75; HW 1.6-1.7; TPF 1.8.

♂. Apical contour of elytron sinuate near suture. Protarsal segment 1 (Fig. 27f) bearing adhesive setae. Mesofemur (Fig. 27c) shorter than metafemur. Metatibia (Fig. 27h) with peg-like setae arranged in a double row; longer than mesotibia (Fig. 27g). Peg-like setae arranged in a single row on mesotrochanter (Fig. 27c); grouped in a field on protibia (Fig. 27f) and mesotibia; lacking on metatrochanter. Abdominal tergite 8 as in Fig. 27b, k. Sternite 8 as in Fig. 27a. Aedeagus as in Fig. 27d, e.

♀. Apical contour of elytron convex near suture. Abdominal tergite 8 as in Fig. 28b, f. Sternite 8 as in Fig. 28e. Genital segment as in Fig. 28a, d.

Comments. See discussion under *M. abessinus*.

Megarthrus mahnerti sp. n. (Figs 29a-i, 30a-g)

Type material. Holotype ♂: Kenya, Central prov., Mt. Aberdares, near NP entrance, 2300m, 25.xi.1974, (V. Mahnert & J. -L. Perret) ex leaf litter and rotten wood, MHNG.

Paratypes (8): same data as holotype, 1♂, 1♀ in BMNH, 1♂, 2♀ in MHNG and 1♂, 1♀ in MRAC; Kenya, Western prov., Mt. Elgon NP, slope of Koitobos Pk., c. 2700m, 15.xi.1974 (V. Mahnert & J. -L. Perret) ex litter under bamboo, 1♀ in MHNG;

Additionnal material (1♀). D. O. Afrika, Langenburg (= Tanzania, Iringa prov., Livingstone Range, Ukenju?) 19.vii.1899 (Fülleborn), ZMHB. The specimen is likely to be conspecific. It is smaller and differs in the pronotal relief.

Distribution. Kenya: Mt. Aberdares; Tanzania: Livingstone Range.

Description. Similar to *M. monticola* from which it may be distinguished as follows: Antenna as in Fig. 29d and abdominal sternite 4 flat. Ratios: AL 2.0; EL 1.8; ET 1.5; HW 1.8; TPF 5.0.

♂. Apical contour of elytron convex near suture; inner apical angle obtuse. Protarsal segment 1 bearing adhesive setae. Mesofemur (Fig. 29b) as long as metafemur. Mesotibia (Fig. 29g) shorter than metatibia (Fig. 29a), both with peg-like setae arranged in a single row, and grouped in a field near apex. Peg-like setae arranged in a single row on mesotrochanter (Fig. 29b) and metatrochanter (Fig. 29h), absent from protibia. Apex of abdominal tergite 8 as in Fig. 29c. Sternite 8 as in Fig. 29i. Aedeagus as in Fig. 29e, f.

♀. Apical contour of elytron and inner apical angle as in Fig. 30g. Medioapical projection of abdominal tergite 8 as in Fig. 30d, e. Sternite 8 as in Fig. 30b. Genital segment as in Fig. 30a, c.

Comments. This species is similar to *M. horticola* and *M. monticola*. As *M. monticola*, it differs from *M. horticola* by the bilobed apex of the female sternite 8. It may be distinguished easily from *M. monticola* by the shape of the apex of the aedeagus.

The species is dedicated to one of the collectors, Mr. Volker Mahnert.

Megarthrus major sp. n. (Fig. 31a-k)

Type material. Holotype ♀: Zaire, Kivu (Albert NP) Tshiaberimu sect., Kirungu, 2720m, 8-9.iii.1954 (P. Vanschuytbroeck & H. Synave) #7928-31, MRAC.

Distribution. Zaire: Kivu.

Description. Similar to *M. gigas* from which it may be distinguished as follows: Ratios: EW 1.3; EY 3.3-3.4; SP 4.5-4.6; TPF abs.

♀. Apical contour of elytron as in Fig. 31k. Abdominal tergite 8 (Fig. 31c, g) without medioapical projection. Sternite 8 as in Fig. 31i. Genital segment as in Fig. 31a, b, d, f; mediodorsal suture of sternite 9 forming an angle projecting anteriorly.

♂. Unknown.

Comments. See discussions under *M. basilewskyi* and *M. gigas*.

Megarthrus maniwaata sp. n. (Figs 32a-h, 33a-g)

Type material. Holotype ♂: Zaire, Ruwenzori Range (Albert NP) Kalonge, river Nyamwamba, tributary of Butahu, 2010m, 2-3.ii.1953 (P. Vanschuytbroeck & J. Kekenbosch) #2214-21, MRAC.

Paratypes (22): same data as holotype, 3♂, 2♀ in MHNG and 8♂, 4♀ in MRAC; Zaire, Ruwenzori Range (Albert NP) Kalonge, river Katsambu, tributary of Butahu, 2000m, 26.i-19.ii.1953 (P. Vanschuytbroeck & J. Kekenbosch) #2155-2200, 1♂ in MRAC; Ruwenzori Range (Albert NP) Kyandolire, river Mulaku, tributary of Kakalari, 1750m, 14.x.1952 (P. Vanschuytbroeck & J. Kekenbosch) ex humus, #1241-43, 1♂ in MRAC; same data, but #1302, 1♂ in MRAC; Kivu (Albert NP) Nyasheke, V. Nyamuragira, 1820m, 14-26.vi.1935 (G. F. de Witte) #1481, 1♂ in MRAC; Rwanda, Cyangugu pref., around Nyakabuye, 9.vi.1985 (H. Mühle) 1♂ in ZMHB.

Distribution. Rwanda; Zaire: Kivu, Ruwenzori Range.

Description. Similar to *M. mwami* from which it may be distinguished as follows: Length 1.15-1.40 mm; width 0.80-0.95 mm. Antenna as in Fig. 33c. Pronotum as in Fig. 33f. Elytron abruptly narrowed at base. Metasternal median ridge fine or absent. Ratios: EL 1.4-1.5; ET 1.6-1.7; EY 2.8-2.9; PT 1.9-2.0; SP 2.5-3.0; TPF 6.5-7.0.

♂. Protarsal segment 1 bearing adhesive setae. Mesofemur (Fig. 32d) as long as metafemur (Fig. 32f). Metatibia (Fig. 32e) with peg-like setae arranged in a double row; longer than mesotibia (Fig. 32c). Protibia not modified. Metatrochanter (Fig. 32f) with 1-3 peg-like setae. Mesotrochanter (Fig. 32d) and mesotibia with peg-like setae grouped in a field. Apex of abdominal tergite 8 as in Fig. 32h. Aedeagus as in Fig. 32a, b.

♀. Medioapical projection of abdominal tergite 8 as in Fig. 33e, g. Sternite 8 as in Fig. 33d. Genital segment as in Fig. 33a, b.

Comments. *Megarthrus maniwaata*, *M. merabet* and *M. mwami* have in commun an evenly and broadly rounded apical margin of the scutellum. They may be distinguished by the sexual characters, in particular by the shape of the apical portion of the aedeagal median lobe and of the basal portion of the female coxites.

Megarthrus merabet sp. n. (Figs 34a-h, 35a-g)

Type material. Holotype ♂: Rwanda, Cyangugu pref., around Nyakabuye, 9.vi.1985 (H. Mühle) ZMHB.

Paratypes (3): Zaire, Ruwenzori Range (Albert NP) Kyandolire, river Mulaku, tributary of Kakalari, 1750m, 14.x.1952 (P. Vanschuytbroeck & J. Kekenbosch) ex humus, #1241-43, 1♂, 1♀ in MRAC; Mutsora (Albert NP) river Katunda, 1600m, 10.ii.1953 (P. Vanschuytbroeck & J. Kekenbosch) #2432, 1♂ in MHNG.

Distribution. Rwanda; Zaire: Ruwenzori Range.

Description. Similar to *M. mwami* from which it may be distinguished as follows: Length 1.15-1.35 mm; width 0.80-0.95 mm. Antenna as in Fig. 35c and pronotum as in Fig. 35f. Elytron abruptly narrowed at base; apical contour convex near suture. Ratios: EL 1.4-1.5; ET 1.4-1.5; ML 1.4; SP 2.2-2.5; TPF 10.0.

♂. Protarsal segment 1 bearing adhesive setae. Mesofemur (Fig. 34e) somewhat longer than metafemur (Fig. 34f). Metatibia (Fig. 34d) longer than mesotibia (Fig. 34c). Metatrochanter (Fig. 34f) with 1-4 peg-like setae. Peg-like setae grouped in a field on mesotrochanter (Fig. 34e), absent from protibia; those on metatibia arranged in a single row, and in a double row near apex, on mesotibia forming in a double row, and grouped

in a field near apex. Apex of abdominal tergite 8 as in Fig. 34h. Aedeagus as in Fig. 34a, b.

♀. Medioapical projection of abdominal tergite 8 as in Fig. 35e, g. Sternite 8 as in Fig. 35d. Genital segment as in Fig. 35a, b.

Comments. See discussion under *M. maniwaata*. The apical projection of the abdominal tergite 8 is particularly small in this species.

Megarthrus monticola Cameron (Figs 36a-i, 37a-h)

Megarthrus monticola CAMERON, 1942: 322.

Type material. Holotype ♂: Kenya, Rift Valley prov., Chyulu Hills, 1700m, vi.1938, BMNH.

Paratypes (10): same data as holotype, 1♂, 8♀ in BMNH and1♀ in MHNG.

Additional material (2): same data as holotype, but vii.1938, 1♂, 1♀ in MHNG.

Distribution. Kenya: Chyulu Hills.

Description. Length 1.6-1.7 mm; width 1.0-1.2 mm. Head, metasternum and abdomen dark brown; pronotum and entire elytron reddish-brown; mouth parts and legs yellowish-brown; antenna reddish-brown, antennomeres 1-4 and 11 paler. Pubescence on pronotum denser along median groove; elytral pubescence sparser, but becoming denser on humeral area; that on abdomen shorter. Metasternal setae shorter than those on prosternum, becoming sparser on median area. Pubescence of abdominal sternites 4-7 uniform, except for a pair of long setae near medioapical margins. Puncturation fine on anterior portion of hypomeron; median area of metasternum impunctate. Frons on level with vertex. Anterior frontal edge not carinate, evenly arcuate. Entire frontal impression indistinct. Eye strongly convex, with highest point reaching level of vertex. Temple similar to that in Fig. 2h. Submentum weakly convex. Antenna (Fig. 37a) without patches of sensilla; antennomeres 3 and 4 slightly asymmetrical. Pronotal disc (Fig. 37d) shallowly depressed along entire lateral edge, flat along median groove; latter shallow, parallel-sided. Anterior prosternal margin not bordered by longitudinal ridges. Protrochanter without transverse ridge. Lateral portion of prepectal ridge straight. Scutellum similar to that in Fig. 2b. Elytron abruptly narrowed at base; base abruptly inclined, overhanging. Elytral disc shallowly depressed along lateral edge; latter slightly convex in dorsal view. Metasternal median ridge fine, low. Abdominal tergite 3 slightly vaulted transversally. Sternites 2 and 3 with median processes as in Fig. 2l. Sternite 4 flat at base, then slightly vaulted transversally.

Ratios:AL 1.8; EL 1.5; ET 1.7; EW 1.3; EY 2.7; GT 2.2; GW 1.6-1.7; HW 2.0; ML 1.6; MP 1.8; PT 1.9; SP 2.5; TPF 5.0.

♂. Apical contour of elytron arcuate near suture; inner apical angle obtuse. Protarsal segment 1 bearing adhesive setae. Mesofemur (Fig. 36g) shorter than metafemur (Fig. 36h). Mesotibia (Fig. 36e) shorter than metatibia (Fig. 36f), both with peg-like setae arranged in a double row and grouped in a field near apex. Peg-like setae arranged in a single row on mesotrochanter (Fig. 36g), double row on metatrochanter (Fig. 36h); absent from protibia. Apex of abdominal tergite 8 as in Fig. 36a, i. Sternite 8 as in Fig. 36b. Aedeagus as in Fig. 36c, d.

♀. Apical contour of elytron and inner apical angle as in Fig. 37h. Medioapical projection of abdominal tergite 8 as in Fig. 37c, g. Sternite 8 as in Fig. 37b. Genital segment as in Fig. 37e, f.

Comments. See discussions under *M. horticola* and *M. mahnerti*.

Megarthrus mukankundiyeorum sp. n. (Figs 38a-i, 39a-g)

Type material. Holotype ♂: Rwanda, 25km N Kibuye, Kayove, 2100m, 15.v.1973 (P. Werner) ex vegetational debris in secondary forest, MHNG.

Paratypes (2♀): Rwanda, Cyangugu pref., around Nyakabuye, 22.ii.1985 (H. Mühle) in MHNG and ZMHB.

Distribution. Rwanda.

Description. Length 1.7-1.8 mm; width 1.1-1.2 mm. Body predominantly red-brown or dark brown, with darkened head and sutural margin of elytron, and paler legs, mouth parts and antennomere 11. Dorsal pubescence fairly uniform, shortened on abdomen, becoming sparser near lateral pronotal edge, denser along sutural margin and on humeral area of elytron. Metasternal setae about as long as those on prosternum, becoming denser near median area. Pubescence on abdominal sternites 4-7 becoming denser near medioapical margins. Puncturation coarse on anterior portion of hypomeron and on median area of metasternum. Frons raised above level of vertex. Anterior frontal edge finely carinate; frontal impression distinct. Eye almost hemispherical, with highest point reaching level of vertex. Temple similar to that in Fig. 2i. Submentum flat. Antenna (Fig. 39e) without patches of sensilla; antennomeres 3 and 4 symmetrical. Pronotal disc (Fig. 39g) slightly depressed along entire lateral edge, flat along median groove; latter deep, parallel-sided. Anterior prosternal margin bordered by a regular row of conspicuous longitudinal ridges. Protrochanter without transverse ridge. Lateral portion of prepectal ridge sinuate. Scutellum similar to that in Fig. 2f. Elytron not narrowed at base; base abruptly inclined, overhanging. Elytral disc flat along lateral edge; latter straight in dorsal view; apical margin somewhat sinuate near suture; inner apical angle almost right-angled. Metasternal median ridge absent. Abdominal tergite 3 slightly vaulted transversally. Sternite 4 flat at base, then slightly vaulted transversally.

Ratios: AL 2.6; EL 1.5; ET 1.7; EW 1.2; EY 2.8-2.9; GT 2.5; GW 1.8; HW 1.6-1.7; ML 1.5; MP 2.0; PT 1.9; SP 2.7-3.0; TPF abs.

♂. Anterior frontal edge subtruncate. Protarsal segment 1 lacking adhesive setae. Mesofemur (Fig. 38h) shorter than metafemur. Mesotibia (Fig. 38f) shorter than metatibia (Fig. 38g), both with peg-like setae grouped in a field. Metatrochanter (Fig. 38e) with a single peg-like seta. Peg-like setae arranged in a single row on mesotrochanter (Fig. 38h), absent from protibia. Apex of abdominal tergite 8 as Fig. 38c, d. Sternite 8 as Fig. 38i. Aedeagus as in Fig. 38a, b.

♀. Anterior frontal edge evenly arcuate. Abdominal tergite 8 (Fig. 39c, d) lacking medioapical projection, with dark tip. Sternite 8 (Fig. 38i) about 1.8x as long as width of its basal projection. Genital segment as in Fig. 39a, b.

Comments. Among the species possessing a ridged prosternal margin (see discussion under *M. africanus*), *M. mukankundiyeorum* may is characterised by the asymmetrical aedeagus, the long antennae and the length of the female abdominal sternite 8.

The species is dedicated to the family of our friend Miss Consolée Mukankundiye, who suffered recently in Rwanda.

Megarthrus mwami sp. n. (Figs 2e, 40a-i, 41a-g)

Type material. Holotype ♂: Burundi, Bururi terr., Nyamurenbe, 900m, 7.iii.1953 (P. Basilewsky) MRAC.

Paratype (2): same data as holotype, 1♀ in MRAC; Rwanda, Cyangugu pref., around Nyakabuye, 1-30.xii.1982 (H. Mühle) 1♂ in ZMHB.

Distribution. Burundi; Rwanda.

Description. Length 1.2-1.3 mm; width 0.9-1.0 mm. Head, metasternum and abdomen dark brown, pronotum and elytron somewhat paler; sutural margin of elytron darkened; mouth parts and legs yellowish-brown; antenna reddish-brown, antennomeres 11 paler. Dorsal pubescence fairly uniform, on pronotum denser along median groove. Elytral pubescence sparser, but becoming denser on humeral area. Abdomen with denser pubescence near posterior margin of tergite 7. Metasternal setae shorter than those on prosternum, becoming sparser medioposteriorly and longer anteriorly. Pubescence of abdominal sternites 4-7 uniform, except for a pair of long setae near each medioapical margin. Puncturation fine on anterior portion of hypomeron; median area of metasternum impunctate. Frons raised above level of vertex. Anterior frontal edge finely carinate, evenly arcuate. Entire frontal impression shallow. Eye strongly convex, with highest point reaching level of vertex. Temple similar to that in Fig. 2h. Submentum weakly convex. Antenna (Fig. 41a) without patches of sensilla; antennomeres 3 and 4 slightly asymmetrical. Pronotal disc (Fig. 41f) shallowly depressed along basal portion of lateral edge, deeply depressed along median groove; latter deep, parallel-sided. Anterior prosternal margin bordered by an irregular row of fine longitudinal ridges. Protrochanter without transverse ridge. Lateral portion of prepectal ridge straight. Scutellum as in Fig. 2e. Elytron somewhat narrowed at base; base abruptly inclined, overhanging. Elytral disc shallowly depressed along lateral edge; latter subangulate in dorsal view; apical margin straight or convex near suture; inner apical angle obtuse. Metasternal median ridge fine, low. Abdominal tergite 3 slightly vaulted transversally. Sternites 2 and 3 with median processes similar to that in Fig. 2m. Sternite 4 flat at base, then slightly vaulted transversally.

Ratios: AL 2.0; EL 1.45; ET 1.6; EW 1.2; EY 2.5; GT 2.0; GW 1.8; HW 1.6-1.7; ML 1.5; MP 1.7; PT 1.8-1.9; SP 2.0-2.5; TPF 6.5-7.0.

♂. Protarsal segment 1 bearing adhesive setae. Mesofemur (Fig. 40g) as long as metafemur (Fig. 40h). Mesotibia (Fig. 40c) shorter than metatibia (Fig. 40d). Metatrochanter (Fig. 40h) with 1-3 peg-like setae. Peg-like setae arranged in a single row on mesotrochanter (Fig. 40g); absent from protibia; those on mesotibia arranged in a single row, and in a double row near apex; those on metatibia arranged in a single row, and grouped in a field near apex. Apex of abdominal tergite 8 as in Fig. 40e,i. Aedeagus as in Fig. 40a, b.

♀. Medioapical projection of abdominal tergite 8 as in Fig. 41d, g. Sternite 8 as in Fig. 41e. Genital segment as in Fig. 41b, c.

Comments. See discussions under *M. maniwaata* and *M. merabet*.

Megarthrus nanus sp. n. (Fig. 42a-k)

Type material. Holotype ♂: Africa or., Katona (= Tanzania, Moshi prov.), Mt. Kilimanjaro, BMNH.

Distribution. Tanzania: Mt. Kilimanjaro.

Description. Similar to *M. zulu* from which it may be distinguished as follows: Length 1.0 mm; width 0.7 mm. Body dark brown, head blackish, elytron reddish-brown with darkened sutural margin; legs, mouth parts and antennomeres 1-4 paler. Antenna as in Fig. 42h. Pronotum as in Fig. 42a. Apical contour of elytron straight near suture. Ratios: EL 1.4; ET 1.5; EY 2.8-2.9; GT 2.0; GW 1.5-1.6; PT 1.8; SP 2.8-2.9.

♂. Protarsal segment 1 bearing adhesive setae. Mesofemur (Fig. 42i) longer than metafemur (Fig. 42k). Metatibia (Fig. 42f) with peg-like setae arranged in a single row, and in a double row near apex; shorter than mesotibia (Fig. 42e). Peg-like setae arranged in a single row on mesotrochanter (Fig. 42i), grouped in a field on metatrochanter (Fig. 42k) and mesotibia, absent from protibia. Apex of abdominal tergite 8 as in Fig. 42c. Aedeagus as in Fig. 42d, g.

♀. Unknown.

Comments. This species and *M. zulu* are the only African members of the genus possessing a transverse ridge on the protrochanter. The aedeagal characters are diagnostic for each of these two species.

Megarthrus negus sp. n. (Figs 43a-h, 44a-g)

Type material. Holotype ♂: Ethiopia, Balê prov., Dinshu, 3200m, 1971 (G. de Rougemont) BMNH.

Paratypes (6): same data as holotype, 1♂, 1♀ in BMNH and 1♂ in MHNG; Balê prov., Sabsebe Washa NP <07°03'N; 39°39'E> 3600m, 1971 (R. O. S. Clarke) under stones near stream, 1♀ in MHNG; Gamo Gofa prov., Gughé highlands, Mt. Tola, c. 3000m, 10-14.xii.1948 (H. Scott) 1♂ in BMNH and 1♂ in MHNG.

Distribution. Southern Ethiopia.

Description. Similar to *M. simienensis* from which it may be distinguished as follows: Anterior frontal edge not carinate and submentum weakly convex. Antenna as in Fig. 44f. Pronotum (Fig. 44g) with deep median groove. Elytron with apical contour straight or convex near suture, and inner apical angle obtuse. Metasternal median ridge absent. Ratios: EL 1.6-1.7; ET 1.6-1.7; HW 1.6-1.7; ML 1.5; SP 2.5-3.0; TPF 3.3-3.5.

♂. Protarsal segment 1 bearing adhesive setae. Mesofemur (Fig. 43f) as long as metafemur. Mesotibia (Fig. 43c) with peg-like setae arranged in a double row; shorter than metatibia (Fig. 43d). Peg-like setae arranged in a single row on mesotrochanter (Fig. 43f) and metatibia, absent from protibia and metatrochanter. Apex of abdominal tergite 8 as in Fig. 43e,h. Sternite 8 as in Fig. 43g. Aedeagus as in Fig. 43a, b.

♀. Medioapical projection of abdominal tergite 8 as in Fig. 44b, d. Sternite 8 as in Fig. 44e. Genital segment as in Fig. 44a, c.

Comments. *Megarthrus negus*, *M. ras*, *M. rougemonti* and *M. simienensis* share conspicuous dark colouration of the body, narrowed elytral base and well developed projection of the female abdominal tergite 8. *Megarthrus negus* differs notably in having a single row of metatibial peg-like setae.

Megarthrus niloticus sp. n. (Figs 45a-k, 46a-g)

Type material. Holotype ♂: Uganda, Bugisu prov., Mt. Elgon, Sipi, 1750m, 31.v.1993 (G. Cuccodoro & D. Erne) ex moist leaf litter at foot of tree in banana plantation, MHNG.

Paratypes (7): Rwanda, Cyangugu pref., around Nyakabuye, 16.x.1984, 1♂ in ZMHB; same data, but 3.x.1985, 1♀ in MHNG; same data, but 31.xii.1985, 1♀ in ZMHB; Zaire, Ruwenzori Range (Albert NP) Kyandolire, river Mulaku, tributary of Kakalari, 1750m, 14.x.1952 (P. Vanschuytbroeck & J. Kekenbosch) ex humus, #1241-43, 1♂ in MHNG and 3♂ in MRAC.

Distribution. Uganda: Mt. Elgon; Rwanda; Zaire: Ruwenzori Range.

Description. Similar to *M. apicicornis* from which it may be distinguished as follows: Length 1.5-1.6 mm; width 0.9-1.1 mm. Pronotum (Fig. 46g) and elytron brown or dark brown; head, metasternum and abdomen darker than pronotum; sutural margin of elytron darkened; mouth parts and legs yellowish-brown; antenna reddish-brown, antennomeres 11 somewhat paler. Eye strongly convex. Antenna as in Fig. 46e. Apical contour of elytron straight near suture; inner apical angle obtuse. Metasternal median ridge fine or absent. Ratios: AL 2.0; EL 1.5; ET 1,7; TPF 5.0.

♂. Protarsal segment 1 (Fig. 45f) bearing adhesive setae. Mesofemur (Fig. 45b) somewhat shorter than metafemur (Fig. 45c). Mesotibia (Fig. 45g) shorter than metatibia (Fig. 45h). Peg-like setae grouped in a field on mesotrochanter (Fig. 45b), mesotibia, metatrochanter (Fig. 45c) and metatibia, absent from protibia. Apex of abdominal tergite 8 as in Fig. 45a, k. Sternite 8 as in Fig. 45i. Aedeagus as in Fig. 45d, e.

♀. Medioapical projection of abdominal tergite 8 as in Fig. 46a, b. Sternite 8 as in Fig. 46f. Genital segment as in Fig. 46c, d.

Comments. Megarthrus niloticus differs from other species with the head widened behind the eyes (see discussions under *M. apicicornis* and *M. congoensis*) by the shape of the male mesotibia in combination with that of the aedeagal tip.

Megarthrus ovalis Cameron (Figs 47a-i, 48a-f)

Megarthrus ovalis Cameron, 1950: 5.

Type material. Holotype ♂: Rwanda, V. Visoke (Albert NP) Bishoke, 2800-3300m, 13-14.ii.1935 (G. F. de Witte) #1125, MRAC.

Paratype (♀): same data as holotype, BMNH.

Additional material (4): Rwanda, S V. Visoke, Virungas, 2950m, 20.iii.1978 (I. M. Redmond) ex dung of *Gorilla. g. beringei*, 1♀ in BMNH and 1♀ in MHNG; Zaire, Kivu (Albert NP) Tshiaberimu sect., river Mbulikerere, tributary of river Kalivina, 2720m, 25.iii.1954 (P. Vanschuytbroeck & H. Synave) #8295, 1♂ in MHNG and 1♂ in MRAC.

Distribution. Rwanda; Zaire: Kivu.

Description. Length 1.35-1.45 mm; width 1.0-1.1 mm. Head blackish; pronotum, elytron and abdomen yellowish-brown; metasternum dark brown; sutural margin of elytron darkened; mouth parts and legs reddish-brown; antenna yellowish-brown, antennomeres 1-4 somewhat paler. Dorsal pubescence fairly uniform, denser on humeral area and along sutural margin of elytron. Metasternal setae shorter than those on prosternum, becoming sparser medioposteriorly and longer anteriorly. Pubescence of abdominal sternites 4-7 uniform, except for a pair of long setae near medioapical margins. Puncturation fine on anterior portion of hypomeron; median area of

metasternum impunctate. Frons raised above level of vertex. Anterior frontal edge not carinate, evenly arcuate. Entire frontal impression shallow. Eye almost hemispherical, with highest point below level of vertex. Temple similar to that in Fig. 2g. Submentum weakly convex. Antenna (Fig. 48d) with patches of sensilla on antennomeres 6-10; antennomere 3 slightly asymmetrical, 4 strongly asymmetrical. Pronotal disc (Fig. 48f) deeply depressed along entire lateral edge, flat along median groove; latter deep, parallel-sided. Anterior prosternal margin not bordered by longitudinal ridges. Protrochanter without transverse ridge. Lateral portion of prepectal ridge straight. Scutellum similar to that in Fig. 2b. Elytron abruptly narrowed at base; base abruptly inclined, overhanging. Elytral disc deeply depressed along lateral edge; latter strongly convex in dorsal view; apical margin convex near suture; inner apical angle obtuse. Metasternal median ridge fine, low. Abdominal tergite 3 slightly vaulted transversally. Sternites 2 and 3 with median processes as in Fig. 2l. Sternite 4 almost flat.

Ratios: AL 1.8; EL 1.6-1.7; ET 1.6; EW 1.4; EY 2.9-3.0; GT 2.0; GW 1.6-1.7; HW 2.2-2.3; ML 1.6; MP 1.5; PT 2.2; SP 4.0-5.0; TPF 5.0.

♂. Protarsal segment 1 bearing adhesive setae. Mesofemur (Fig. 47f) as long as metafemur (Fig. 47g). Mesotibia (Fig. 47c) as long as metatibia (Fig. 47d), both with peg-like setae grouped in a field. Metatrochanter (Fig. 47g) with 2-3 peg-like setae. Peg-like setae arranged in a single row on mesotrochanter (Fig. 47f), absent from protibia. Apex of abdominal tergite 8 as in Fig. 47e, i. Sternite 8 as in Fig. 47h. Aedeagus as in Fig. 47a, b.

♀. Medioapical projection of abdominal tergite 8 as in Fig. 48b. Sternite 8 as in Fig. 48e. Genital segment as in Fig. 48a, c.

Comments. Megarthrus ovalis is characterised by presence of protarsal adhesive setae in combination with the aedeagus distinctly asymmetrical .

Megarthrus panga sp. n. (Fig, 49a-g; 50a-d)

Type material. Holotype ♂: Zaire, Kivu prov. (Albert NP) V. Mikeno, near Rweru, 2400m, 26-27.vii.1934 (G. F. de Witte) ex bamboo, #501, BMNH (mislabelled paratype of *M. apicicornis*).

Distribution. Zaire: V. Mikeno.

Description. Similar to *M. apicicornis* from which it may be distinguished as follows: Length 1.7 mm; width 1.1 mm. Elytral disc concolorous with sutural margin. Antenna as in Fig. 49d. Pronotum as in Fig. 50d. Elytron with apical contour convex near suture and inner apical angle obtuse. Metasternal median ridge fine, low. Ratios: AL 2.0; EL 1.4; ET 1.7; EW 1.3; EY 2.6-2.7; HW 2.0; SP 2.5.

♂. Protarsal segment 1 bearing adhesive setae. Mesofemur (Fig. 49f) as long as metafemur (Fig. 49g). Mesotibia (Fig. 49a) as long as metatibia (Fig. 49e), with peg-like setae arranged in a single row, and grouped in a field near apex. Peg-like setae grouped in a field on mesotrochanter (Fig. 49f), metatrochanter (Fig. 49g) and metatibia, absent from protibia. Abdominal tergite 8 (Fig. 50a, b) with subapical process projecting ventrally. Sternite 8 as in Fig. 50c. Aedeagus as in Fig. 49b, c.

♀. Unknown.

Comments. Megarthrus panga and *M. stylifer* may be distinguished from other species with the head widened behind the eyes (see discussion under *M. apicicornis*) by the shape of the male abdominal tergite 8. The shape of the aedeagal tip is diagnostic for each of these two species.

Megarthrus ras sp. n. (Fig. 51a-k)

Type material. Holotype ♂: Ethiopia, Gonder (= Simên) prov., Arghine, 3500m or higher, 24.xi.1952 (H. Scott) ex roots of tufted grass in ravine, BMNH (mislabelled paratype of *M. simienensis*).

Paratypes (3♂): same data as holotype, 2 in MHNG (mislabelled paratypes of *M. simienensis*); same data, but near torrent, ex peat soil, under boulders or at roots of plants, 1 in BMNH (mislabelled paratype of *M. simienensis*).

Distribution. Northern Ethiopia.

Description. Similar to *M. simienensis* from which it may be distinguished as follows: Length 1.3-1.4 mm; width 0.9-1.0 mm. Body predominantly blackish, elytron dark brown with darkened sutural margin; legs and mouth parts yellowish-brown; antenna reddish-brown, except for paler antennomeres 1-4. Frons raised above level of vertex. Anterior frontal edge indistinctly carinate; frontal impression shallow. Eye strongly convex. Submentum weakly convex. Antenna as in Fig. 51c. Pronotum as in Fig. 51h. Elytron slightly narrowed at base; apical contour convex near suture; inner apical angle obtuse. Ratios: EL 1.6; HW 1.8; ML 1.5; SP 2.5-3.0.

♂. Protarsal segment 1 bearing adhesive setae. Mesofemur (Fig. 51k) as long as metafemur (Fig. 51i). Mesotibia (Fig. 51d) shorter than metatibia (Fig. 51e), with peg-like setae arranged in a double row. Peg-like setae arranged in a single row on mesotrochanter (Fig. 51k), grouped in a field on metatrochanter (Fig. 51i) and metatibia, absent from protibia. Apex of abdominal tergite 8 as in Fig. 51f. Sternite 8 as in Fig. 51g. Aedeagus as in Fig. 51a, b.

♀. Unknown.

Comments. Megarthrus ras differs from similar species (see discussion under *M. negus*) by the male metatrochanter bearing peg-like setae.

Megarthrus rougemonti sp. n. (Figs 52a-h, 53a-g)

Type material. Holotype ♂: Ethiopia, Balê prov., Dinshu, 3200m, 1971 (G. de Rougemont) BMNH.

Paratypes (3): same data as holotype, 1♂, 1♀ in BMNH; Dinshu, 3200m, 14-28.xii.1971 (R. O. S. Clarke) under stones in *Juniper/Hagenia* woodland, 1♂ in MHNG.

Additional material (1♀). Ethiopia, Arsî prov., Mt. Ch'ilalo, 3600-4000m, 21.xi.1926 (H. Scott) Box 113, in moorland, ex decaying stem of *Lobelia rhychopetalum* Hems., BMNH (paralectotype of *M. abessinus*). Possibly conspecific but the specimen differs by the 8th abdominal sternite bearing 8 long subapical setae.

Distribution. Southern Ethiopia.

Description. Similar to *M. simienensis* from which it may be distinguished as follows: Length 1.45-1.55 mm; width 0.95-1.05 mm. Head, pronotum, metasternum and abdomen blackish; elytron dark brown; sutural margin of elytron darkened; mouth

parts and legs yellowish-brown; antenna reddish-brown, antennomeres 1-4 somewhat paler. Pronotal pubescence uniform. Anterior frontal edge not carinate; frontal impression shallow or indistinct. Frons on level with or slightly raised above level of vertex. Eye strongly convex. Submentum weakly convex. Antenna as in Fig. 52c. Pronotal disc (Fig. 53e) shallowly depressed along basal portion of lateral edge; median groove deep. Elytron slightly narrowed at base; not depressed along lateral edge; inner apical angle obtuse. Abdominal tergite 3 almost flat. Ratios: EL 1.5-1.6; ET 1.6-1.7; EY 2.6-2.7; HW 1.6-1.7; ML 1.4; PT 1.9; SP 3.0-3.5; TPF 3.2-3.5.

♂. Apical contour of elytron as in Fig. 53g. Protarsal segment 1 bearing adhesive setae. Mesofemur (Fig. 52f) as long as metafemur. Metatibia (Fig. 52e) longer than mesotibia (Fig. 52d), with peg-like setae arranged in a single row, and grouped in a field near apex. Peg-like setae arranged in a single row on mesotrochanter (Fig. 52f), grouped in a field on mesotibia, absent from protibia and metatrochanter. Apex of abdominal tergite 8 as in Fig. 52g. Sternite 8 as in Fig. 52h. Aedeagus as in Fig. 52a, b.

♀. Apical contour of elytron somewhat convex near suture. Medioapical projection of abdominal tergite 8 as in Fig. 53c, f. Sternite 8 as in Fig. 53b. Genital segment as in Fig. 53a, d.

Comments. Megarthrus rougemonti differs from similar species (see discussion under *M. negus*) by the short antennomere 5 in combination with the male metatrochanter lacking peg-like setae.

The species is dedicated to one of the collectors, Mr Guillaume de Rougemont.

Megarthrus scotti sp. n. (Fig. 54a-h)

Type material. Holotype ♀: Ethiopia, Gamo Gofa prov., Gughé highlands, Dita, c. 3000m, 4.xii.1948 (H. Scott) ex humus beneath *Knipholia* plants, BMNH

Paratypes (2♀): same data as holotype, in BMNH and MHNG.

Distribution. Southern Ethiopia

Description. Similar to *M. clarkei* from which it may be distinguished as follows: Length 1.55-1.65 mm; width 1.05-1.15 mm. Frontal impression deep. Antenna as in Fig. 54a and pronotum (Fig. 54g) with median groove deep. Ratios: AL 2.0; ET 1.6; GT 2.3; PT 1.8; SP 3.3-4.0; TPF 4.0.

♀. Apical contour of elytron and inner apical angle as in Fig. 54h. Medioapical projection of abdominal tergite 8 as in Fig. 54c, e. Sternite 8 as in Fig. 54f. Genital segment as in Fig. 54b, d.

♂. Unknown.

Comments. See discussion under *M. clarkei.*

The species is dedicated to the collector, Mr Hugh Scott.

Megarthrus selenitus sp. n. (Fig. 55a-g)

Type material. Holotype ♀: Uganda, Ruwenzori Range, Toro prov., above Kilembe, 2000m, 4.v.1993 (G. Cuccodoro & D. Erne) ex moist vegetational debris near stream in patch of damaged forest, MHNG.

Distribution. Uganda: Ruwenzori Range.

Description. Similar to *M. mukankundiyeorum* from which it may be distinguished as follows: Length 1.6 mm; width 1.1 mm. Antenna as in Fig. 55a. Elytron with apical contour straight near suture and inner apical angle right-angled. Metasternal median ridge fine, low. Ratios: EW 1.15; GT 2.2; ML 1.6; PT 1.8; TPF abs.

♀. Abdominal tergite 8 (Fig. 55c, f) lacking medioapical projection, with dark tip. Sternite 8 (Fig. 55e) 2.2-2.3x as long as width of its median projection. Genital segment as in Fig. 55b, d.

♂. Unknown.

Comments. Among the species possessing a ridged prosternal margin (see comments under *M. africanus*), *M. selenitus* may be distinguished easily by the particularly elongate abdominal sternite 8.

Megarthrus simienensis Fagel (Figs 56a-g, 57a-g)

Megarthrus simienensis Fagel, 1957: 30.

Type material. Holotype ♂: Ethiopia, Gonder (= Simên) prov., E of Mindigabsa, over 3000m, 16.xi.1952 (H. Scott) ex dry soil in roots of tufted plants overhanging a stream, BMNH.

Paratypes (2♀): same data as holotype, BMNH.

Additional material (23): same data as holotype, 1♀ in MHNG; Ethiopia, Gonder (= Simên) prov., Arghine, 3500m or higher, 24.xi.1952 (H. Scott) near torrent, ex peat soil, under boulders or at roots of plants, 1♀ in BMNH (mislabelled as paratype); same data, but ex roots of tufted grass in ravine, 4♂, 10♀ in BMNH (mislabelled as paratypes), 2♂, 1♀ in MHNG and 2♀ in MRAC; near Mindigabsa, c. 3500m, 29.xii.1952 (H. Scott) 2♀ in BMNH (mislabelled as paratypes).

Distribution. Northern Ethiopia

Description. Length 1.45-1.65 mm; width 1.05-1.20 mm. Head, metasternum and abdomen blackish; pronotum and elytron dark brown; sutural margin of elytron darkened; mouth parts and legs yellowish-brown; antenna reddish-brown, antennomeres 1-4 somewhat paler. Dorsal pubescence fairly uniform, becoming somewhat denser along pronotal median groove and on humeral area of elytron. Abdomen with pubescence denser near posterior margin of tergite 7. Metasternal setae shorter than those on prosternum, becoming sparser medioposteriorly and longer anteriorly. Pubescence on abdominal sternites 4-7 uniform, except for a pair of long setae near medioapical margins. Puncturation fine on anterior portion of hypomeron; median area of metasternum impunctate. Frons raised above level of vertex. Anterior frontal edge not carinate, evenly arcuate. Entire frontal impression shallow or indistnct. Eye weakly convex, with highest point below level of vertex. Temple similar to that in Fig. 2g. Submentum almost flat. Antenna (Fig. 57c) without patches of sensilla; antennomeres 3 and 4 slightly asymmetrical. Pronotal disc (Fig. 57f) shallowly depressed along entire lateral edge, flat along median groove; latter shallow, parallel-sided. Anterior prosternal margin bordered by an irregular row of fine longitudinal ridges. Protrochanter without transverse ridge. Lateral portion of prepectal ridge straight. Scutellum similar to that in Fig. 2a. Elytron abruptly narrowed at base; base abruptly inclined, overhanging. Elytral

disc slightly depressed along lateral edge; latter straight in dorsal view; apical margin somewhat sinuate near suture; inner apical angle right-angled. Metasternal median ridge fine, low. Abdominal tergite 3 slightly vaulted transversally. Sternites 2 and 3 with median processes as in Fig. 2l. Sternite 4 flat at base, then slightly vaulted transversally.

Ratios: AL 1.8; EL 1.7-1.8; ET 1.8-2.0; EW 1.2; EY 2.8-2.9; GT 2.0; GW 1.6-1.7; HW 2.0; ML 1.6; MP 1.7; PT 2.0; SP 2.5; TPF 3.3-3.4.

♂. Protarsal segment 1 bearing adhesive setae. Mesofemur (Fig. 56f) as long as metafemur. Metatibia (Fig. 56e) longer than mesotibia (Fig. 56c), with peg-like setae arranged in a double row, and grouped in a field near apex. Peg-like setae arranged in a single row on mesotrochanter (Fig. 56f), grouped in a field on mesotibia, absent from protibia and metatrochanter. Apex of abdominal tergite 8 as in Fig. 56d. Sternite 8 as in Fig. 56g. Aedeagus as in Fig. 56a, b.

♀. Medioapical projection of abdominal tergite 8 as in Fig. 57e, g. Sternite 8 as in Fig. 57d. Genital segment as in Fig. 57a, b.

Comments. *Megarthrus simienensis* differs from similar species (see discussion under *M. negus*) by the pattern of the metatibial peg-like setae and by the antennomere 5 which is as long as antennomere 4.

Megarthrus spinosus sp. n. (Fig. 58a-g)

Type material. Holotype ♀: Uganda, Bugisu prov., Mt. Elgon, Sipi, 1750m, 31.v.1993 (G. Cuccodoro & D. Erne) ex moist leaf litter at foot of tree in banana plantation, MHNG.

Paratypes (6♀): same data as holotype, 1 in BMNH, 3 in MHNG, 1 in MRAC and 1 in ZMHB.

Distribution. Uganda: Mt. Elgon.

Description. Similar to *M. mukankundiyeorum* from which it may be distinguished as follows: Antenna as in Fig. 58d. Pronotum as in Fig. 58g. Elytron with lateral contour somewhat concave and apical contour convex near suture. Ratios: AL 2.2; HW 1.6-1.7; TPF abs.

♀. Abdominal tergite 8 (Fig. 58b, f) lacking medioapical projection, with tip hyaline. Sternite 8 (Fig. 58e) about 1.8x as long as width of its median projection. Genital segment as in Fig. 58a, c.

♂. Unknown.

Comments. Among the species possessing a ridged prosternal margin (see comments under *M. africanus*), *M. spinosus* may be distinguished easily by the antennae which are only 2.2x as long as the pronotum.

The water loading behaviour has been recorded in this species (*Megarthrus* sp. B in Cuccodoro 1995).

Megarthrus stylifer sp. n. (Figs 59a-g, 60a-k)

Type material. Holotype ♂: Zaire, Ruwenzori Range (Albert NP) Kyandolire, river Mulaku, tributary of Kakalari, 1750m, 14.x.1952 (P. Vanschuytbroeck & J. Kekenbosch) ex humus, #1241-43, MRAC.

Paratypes (5): same data as holotype, 2♂ in MHNG and 2♂, 1♀ in MRAC.

Distribution. Zaire: Ruwenzori Range.

Description. Similar to *M. apicicornis* from which it may be distinguished as follows: Length 1.4-1.5 mm; width 0.9-1.1 mm. Eye strongly convex. Antenna as in Fig. 60d. Pronotum as in Fig. 60i. Metasternal median ridge fine, low. Ratios: AL 2.0: ET 1.5; SP 2.5; TPF 4.0.

♂. Protarsal segment 1 bearing adhesive setae. Mesofemur (Fig. 60b) shorter than metafemur (Fig. 60c). Mesotibia (Fig. 59b) shorter than metatibia (Fig. 59e). Protibia lacking peg-like setae. Mesotrochanter (Fig. 60b), mesotibia, metatrochanter (Fig. 60c) and metatibia with peg-like setae grouped in a field. Abdominal tergite 8 (Fig. 59c, f, g) with subapical process projecting ventrally. Sternite 8 as in Fig. 60a. Aedeagus as in Fig. 59a, d.

♀. Medioapical projection of abdominal tergite 8 as in Fig. 60g, k. Sternite 8 as in Fig. 60h. Genital segment as in Fig. 60e, f.

Comments. See discussion under *M. panga*.

Megarthrus twa sp. n. (Figs 61a-h, 62a-g)

Type material. Holotype ♂: Kenya, Katamayu river (= Rift Valley prov., Gatamayu river?) ix.1934 (A. F. J. Gedye) BMNH.

Paratypes (7): same data as holotype, 1♀ in BMNH and 2♂ in FMNH; Kenya, Central prov., Mt. Aberdares NP, Treetops Hotel, 17.viii.1960 (D. H. & A. C. Kistner & R. Banfill) ex sifted elephant manure, Field No. 618, 2♀ in BMNH and 1♀ in MHNG; Zaire, Kivu (Albert NP) Tshiaberimu sect., river Mbulikerere, tributary of river Kalivina, 2720m, 25.iii.1954 (P. Vanschuytbroeck & H. Synave) #8295, 1♂ in MRAC.

Distribution. Kenya: Mt. Aberdares; Zaire: Kivu.

Description. Similar to *M. zulu* from which it may be distinguished as follows: Length 1.1-1.4 mm; width 0.7-0.9 mm. Antenna (Fig. 62b) dark brown except for antennomeres 1-4 paler; antennomeres 6-8 with patches of sensilla. Pronotum as Fig. 62f and protrochanter without transverse ridge. Ratios: ET 1.7; GT 2.2; GW 1.8; ML 1.6; SP 4.5-7.0; TPF 5.0.

♂. Protarsal segment 1 bearing adhesive setae. Mesofemur (Fig. 61f) shorter than metafemur. Metatibia (Fig. 61e) longer than mesotibia (Fig. 61d), with peg-like setae arranged in a double row, and grouped in a field near apex. Peg-like setae arranged in a single row on mesotrochanter (Fig. 61f), grouped in a field on mesotibia, absent from protibia and metatrochanter. Apex of abdominal tergite 8 as in Fig. 61c, h. Aedeagus as in Fig. 61a, b.

♀. Medioapical projection of abdominal tergite 8 as in Fig. 62e, g. Sternite 8 as in Fig. 62a. Genital segment as in Fig. 62c, d.

Comments. *Megarthrus twa* may be distinguished by the conspicuously dark colouration of the body in combination with the presence of a particularly narrow projection of the abdominal sternite 8.

Megarthrus vanschuytbroecki sp. n. (Figs 63a-i, 64a-g)

Type material. Holotype ♂: Zaire, Ruwenzori Range (Albert NP) Kalonge, river Nyamwamba, tributary of Butahu, 2010m, 2-3.ii.1953 (P. Vanschuytbroeck & J. Kekenbosch) #2214-21, MRAC.

Paratypes (14): same data as holotype, 3♂, 1♀ in MHNG and 5♂, 2♀ in MRAC; Kalonge (Albert NP) river Katauleko, tributary of Butahu, 2060m, 28.viii.1952 (P. Vanschuytbroeck & J. Kekenbosch) ex humus, #873, 1♂ in MRAC; Kalonge (Albert NP) river Karambura, tributary of Katauleko, 2060m, 30.i.-21.ii.1953 (P. Vanschuytbroeck & J. Kekenbosch) #2225-59, 1♂ in MRAC; near Kalonge (Albert NP) Kikyo, 2180m, 30.viii.1952 (P. Vanschuytbroeck & J. Kekenbosch) #670-71, 1♂ in MRAC.

Distribution. Zaire: Ruwenzori Range.

Description. Similar to *M. apicicornis* from which it may be distinguished as follows: Length 1.5-1.8 mm; width 1.00-1.15 mm. Antenna as in Fig. 64c and pronotum as in Fig. 64g. Elytron with apical contour somewhat convex near suture and inner apical angle obtuse. Ratios: AL 2.0-2.2; EL 1.7-1.9; ET 1.6-1.8; ML 1.4; SP 2.8-3.4; TPF 4.0.

♂. Protarsomere 1 bearing adhesive setae. Mesofemur (Fig. 63e) shorter than metafemur (Fig. 63a). Mesotibia (Fig. 63g) shorter than metatibia (Fig. 63h), with peg-like setae grouped in a field. Peg-like setae arranged in a single row on mesotrochanter (Fig. 63e), arranged in a double row on metatibia, absent from protibia and metatrochanter (Fig. 63a). Abdominal tergite 8 as in Fig. 63b, f. Sternite 8 as in Fig. 63i. Aedeagus as in Fig. 63c, d.

♀. Medioapical projection of abdominal tergite 8 as in Fig. 64b, e. Sternite 8 as in Fig. 64a. Genital segment as in Fig. 64d, f.

Comments. This species is easily distinguished from other African congeners by the hook-shaped aedeagal tip. See also comments under *M. apicicornis*.

The species is dedicated to one of the collectors, Mr Paul Vanschuytbroeck.

Megarthrus watutsi sp. n. (Figs 65a-h, 66a-g)

Type material. Holotype ♂: Rwanda (Albert NP) at foot of V. Karisimbi, Lake n'Gando, 2400m, 8.iii.1935 (G. F. de Witte) #1216, BMNH (paratype of *M. apicicornis*).

Paratypes (4): same data as holotype, 1♀ in BMNH (paratype of *M. apicicornis*); same data, but 6.iii.1935 (G. F. de Witte) #1243, 1♂ in MHNG (paratype of *M. apicicornis*); at foot of V. Karisimbi (Albert NP) Ilega, 2400m, 12.iii.1935, #1315, 1♀ in MRAC (paratype of *M. apicicornis*); Mt. Tamira (Albert NP) Lake Gando, 2600m, ii-iii.1935 (G. F. de Witte) #1310, 1♀ in MHNG (mislabelled paratype of *M. apicicornis*).

Distribution. Rwanda: Mt. Tamira and V. Karisimbi.

Description. Similar to *M. apicicornis* from which it may be distinguished as follows: Length 1.5-1.6 mm; width 0.9-1.1 mm. Pronotum and elytron brown or dark brown; head, metasternum and abdomen darker; sutural margin of elytron darkened; mouth parts and legs yellowish-brown; antenna reddish-brown, antennomere 11 paler. Frons raised above level of vertex. Frontal impression shallow. Antenna as in Fig. 66d. Pronotum as in Fig. 66e. Metasternal median ridge fine or absent. Ratios: AL 2.0; EL 1.5; ET 1.8-1.9; TPF 5.0-6.7.

♂. Apical contour of elytron somewhat convex near suture; inner apical angle obtuse. Protarsal segment 1 bearing adhesive setae. Mesofemur (Fig. 65g) as long as metafemur (Fig. 65h). Mesotibia (Fig. 65e) shorter than metatibia (Fig. 65d), with peg-like setae arranged in a double row, and grouped in a field near apex. Peg-like setae grouped in a field on metatrochanter (Fig. 65h), mesotrochanter (Fig. 65g) and

metatibia; absent from protibia. Apex of abdominal tergite 8 as in Fig. 65f. Sternite 8 as in Fig. 65a. Aedeagus as in Fig. 65b, c.

♀. Apical contour of elytron somewhat sinuate near suture; inner apical angle right-angled. Medioapical projection of abdominal tergite 8 as in Fig. 66b, g. Sternite 8 as in Fig. 66f. Genital segment as in Fig. 66a, c.

Comments. Megarthrus watutsi is one of the species with head widened behind the eyes (see discussions under *M. apicicornis* and *M. congoensis*). It is distinguished by the male sexual characters, notably abdominal tergite 8 lacking a ventral process, broad aedeagal tip and shape of the mesotibia.

Megarthrus wittei Cameron (Figs 67a-h, 68a-f)

Megarthrus wittei CAMERON, 1950: 5.

Type material. Holotype ♂: Zaire, Kivu prov. (Albert NP) Sake, 1960m, 19-22.ii.1934 (G. F. de Witte) #253, MRAC.

Paratypes (2): Zaire, Kivu prov. (Albert NP) Kabasha, Kanyabayongo, 1760m, 7.xii.1934 (G. F. de Witte) #877, 1♂, 1♀ in BMNH.

Additional material (2): Cameroon, Bamenda distr., Bamenda, 25.i.1957 (V. F. Eastop) 1♂ in MHNG; Kenya, Rift Valley prov., Molo, 13-15.x.1954 (V. F. Eastop) 4♂, 5♀ in BMNH and 1♂, 1♀ in MHNG; Zaire, Oriental prov., Nizi, Blukwa, 23.xii.1928 (A. Collart) 1♀ in BMNH.

Distribution. Cameroon: Mt. Bambouto; Kenya: Rift Valley prov.; Zaire: Kivu.

Description. Length 1.2-1.3 mm; width 0.8-1.0 mm. Head blackish; metasternum and abdomen dark brown; pronotal disc and entire elytron reddish-brown; mouth parts and legs reddish-brown; antenna entirely yellowish. Dorsal pubescence fairly uniform, denser on humeral area of elytron, shortened on abdomen. Metasternal setae shorter than those on prosternum, becoming sparser medioposteriorly and longer anteriorly. Pubescence of abdominal sternites 4-7 uniform, except for a pair of long setae near medioapical margins. Puncturation fine on anterior portion of hypomeron; median area of metasternum impunctate. Frons on level with vertex. Anterior frontal edge not carinate, evenly arcuate. Frontal impression shallow in middle and indistinct laterally. Eye almost hemispherical, with highest point below level of vertex. Temple similar to that in Fig. 2h. Submentum weakly convex. Antenna (Fig. 68c) without patches of sensilla; antennomeres 3 and 4 slightly asymmetrical. Pronotal disc (Fig. 68e) shallowly depressed along basal portion of lateral edge and along median groove; latter deep, parallel-sided. Anterior prosternal margin bordered with an irregular row of fine longitudinal ridges. Protrochanter without transverse ridge. Lateral portion of prepectal ridge straight. Scutellum similar to that in Fig. 2b. Elytron abruptly narrowed at base; base gradually inclined, overhanging. Elytral disc shallowly depressed along lateral edge; latter straight in dorsal view; apical margin convex near suture; inner apical angle obtuse. Metasternal median ridge fine, low. Abdominal tergite 3 slightly vaulted transversally. Sternites 2 and 3 with median processes as in Fig. 2l. Sternite 4 flat at base, then slightly vaulted transversally.

Ratios: AL 2.0; EL 1.5; ET 1.6; EW 1.2; EY 2.9-3.0; GT 2.0; GW 2.0; HW 2.0; ML 1.5; MP 1.7; PT 2.1; SP 2.5; TPF 10.0.

♂. Protarsal segment 1 bearing adhesive setae. Mesofemur (Fig. 67f) longer than metafemur (Fig. 67h). Metatibia (Fig. 67d) as long as mesotibia (Fig. 67c), with peg-like setae arranged in a single row, and grouped in a field near apex. Metatrochanter (Fig. 67h) with 1-3 peg-like setae. Peg-like setae arranged in a double row on mesotrochanter (Fig. 67f), grouped in a field on mesotibia, absent from protibia. Apex of abdominal tergite 8 as in Fig. 67g. Sternite 8 as in Fig. 67a. Aedeagus as in Fig. 67b, e.

♀. Medioapical projection of abdominal tergite 8 as in Fig. 68f. Sternite 8 as in Fig. 68d. Genital segment as in Fig. 68a, b.

Comments. See discussion under *M. falasha*.

Megarthrus zulu sp. n. (Figs 69a-h, 70a-g)

Type material. Holotype ♂: Republic of South Africa, Cape prov. S, Marathon <34°02'S; 23°19'E> 9.xii.1976 (S. Endrödy-Younga) ex cattle and horse dung, E-Y:1306, TMSA.

Paratypes (411): same data as holotype, 1♂, 1♀ in MHNG and 2♂, 1♀ in TMSA; Republic of South Africa, Cape prov. S, Harkeville Forest <34°04'S; 23°10'E> 7.xii.1976 (S. Endrödy-Younga) ex elephant dung, E-Y:1300, 4♂, 4♀ in MHNG and 12♂, 4♀ in TMSA; same data, but 13.xii.1976, groundtrap with meat bait, E-Y:1311, 1♂ in MHNG and 1♂ in TMSA; Keurboomstrand <34°00'S; 23°27'E> 8.xii.1976 (S. Endrödy-Younga) groundtraps, 8 days, E-Y:1301, 1♂ in TMSA; Cape prov. E, Katberg, 1300m, 1-15.i.1933 (R. E. Turner) 1♀ in BMNH; Cape prov., Amatole, Isidenge For. St. <32°41'S; 27°15'E> 1.xii.1986 (S. Endrödy-Younga) beating in forest, E-Y:2337, 1♂ in TMSA; same data, but 19.xi.1987, ex horse dung, E-Y:2527, 3♂, 3♀ in MHNG, 1♂, 1♀ in MRAC and 17♂, 11♀ in TMSA; same data, but ex *Quercus* forest litter, E-Y:2517, 1♂, 3♀ in TMSA; same data, but Isidenge For. St. B1 <32°41'S; 27°14'E> 15.xi.1987, ex *Pinus* bark, E-Y:2516, 1♂, 1♀ in TMSA; George, Kranshoek, 23.xii.1981 (S. Peck) ex forest litter under carrion, FMHD #81-728, 1♂ in MHNG and 2♂, 1♀ in FMNH; George, Gouna, 23.xii.1981 (S. Peck) ex forest log litter, berlese, FMHD #81-729, 2♀ in FMNH; George, Saasveld, 26.xii.1981 (S. Peck) ex forest litter under carrion bait, berlese, FMHD #81-731, 1♀, FMNH; Groenkop <33°57'S; 22°33'E> i.1985 (J. Koen) 1♂ in TMSA; Knysna, Buffelsnek, 25.xii.1981 (S. Peck) ex forest litter under bait trap, berlese, FMHD #81-633, 2♂, 2♀ in FMNH and 2♂, 1♀ in MHNG; same data, but 800m (S. & J. Peck) ex forest litter under carrion baits, fynbos, #81-187b, 5♂, 3♀ in FMNH; Knysna, Diepwalle, 450m, 12-30.xii.1981 (S. & J. Peck) ex mixed *Podocarpus* forest, window-malaise trap, 2♂, 2♀ in FMNH and 1♂, 1♀ in MHNG; same data, but (S. Peck) ex forest, malaise trough, FMHD #81-711, 1♂, 2♀ in FMNH and 1♂, 2♀ in MHNG; same data, but 12.xii.1981, ex elephant dung, berlese, FMHD #81-603, 30♂, 20♀ in FMNH, 4♂, 4♀ in MHNG and 1♂, 1♀ in MRAC; same data, but 23.xii.1981, ex forest litter, berlese, FMHD #81-629, 2♂, 2♀ in MHNG and 2♂, 3♀ in FMNH; same data, but 17.xii.1981, ex forest fungi litter, berlese, FMHD #81-721, 1♀ in FMNH; Plettenberg Bay Natures Vly., 29.xii.1981 (S. Peck) ex forest litter under dung, berlese, FMHD #81-641, 3♂, 1♀ in FMNH and 2♂, 1♀ in MHNG; Stormsrivier, Goesabos, 15-30.xii.1981 (S. Peck) ex forest, malaise trough, FMHD #81-704, 1♀ in FMNH; Natal prov. Middland, Doring Clark Nat. Res. <29°34'S; 30°17'E> 11.xii.1989 (S. Endrödy-Younga & J. Klimaszewski) ex river bank in forest, E-Y:2759, 1♂ in TMSA; Karkloof for. <29°18'S; 30°13'E> 11.xii.1989 (S. Endrödy-Younga & J. Klimaszewski) ex horse dung, E-Y:2762, 1♀ in TMSA; Northington <29°28'S; 30°01'E> 1420m, 12.xii.1989 (S. Endrödy-Younga & J. Klimaszewski) ex sifted forest litter, E-Y:2764, 2♂, 2♀ in MHNG and 3♂, 5♀ in TMSA; Natal prov., 75km WSW Estcourt, Cathedral Pks. For. Sta., 1400m, 26.xii.1979 (S. & J. Peck) ex *Eucalyptus* logs, frass, fungi and decaying bark, Ber 22, 1♀ in FMNH; same data, but berlese residue, FMHD 79-189, 1♂ in FMNH; same data, but 7-31.xii.1979, 4♂, 17♀ in FMNH and 3♂, 3♀ in MHNG; same data, but 2000m, 20.xii.1979 (S. & J. Peck) ex rotted *Boletus* litter in pine plantation, Ber 14, 1♂ in CNCI, 25♂, 34♀ in FMNH and 1♂, 1♀ in MHNG; same data, but B #14, FMHD #79-195, 1♂ in FMNH; same data, but berlese

residue, FMHD #79-195, 7♂, 11♀ in FMNH, 2♂, 2♀ in MHNG and 1♂, 1♀ in MRAC; same data, but 1500m, 19.xii.1979, ex rotted *Boletus* bait station in podocarp forest, Ber 11, 12♂, 12♀ in FMNH and 2♂, 2♀ in MHNG; same data, but 31.xii.1979, ex podocarp forest, mini-carrion bait traps, Ber 32, 1♂ in FMNH; same data, but ex rotted *Boletus* bait, 3♂, 7♀ in SEMC; same data, but Catchment 2, 1760m, 21-31.xii.1979, ex stream side shrubs, malaise trap, 1♂, 1♀ in FMNH; same data, but Rainbow Gorge, 2000m, 8-31.xii.1979, ex Podocarp forest, malaise through, 1♂, 1♀ in FMNH; Weza Forest Station <30°36'S; 29°45'E> 22.xi.1989 (S. Endrödy-Younga & J. Klimaszewski) ex horse dung, E-Y:2711, 1♂, 2♀ in TMSA; Pietermaritzburg, Fort Napier, 1919, #127, eig. Nr. 36,1926, 1♀ in FMNH; Weza, Bangeni forest <30°38'S; 29°39'E> 21.xi.1989 (S. Endrödy-Younga & J. Klimaszewski) ex sifted forest litter, E-Y:2706, 1♂, in MHNG and 2♂ in TMSA; Weza, Ingeni forest <30°32'S; 29°41'E> 18.xi.1989 (S. Endrödy-Younga & J. Klimaszewski) ex forest floor litter, E-Y:2689, 1♀ in TMSA; same data, but ex bushbuck excrement, E-Y:2690, 1♂ in MHNG and 1♂, 1♀ in TMSA; same data, but 23.xi.1989, ex sifted grass in forest, E-Y:2714, 1♂ in TMSA; Weza, lower Stinkwood for. <30°34'S; 29°43'E> 17.xi.1989 (S. Endrödy-Younga & J. Klimaszewski) ex sifted forest litter, E-Y:2686, 1♂ in TMSA; Transkei prov., Port St. Johns, Pondoland, 10-31.vii.1923 (R. E. Turner) 1♂ in BMNH; Transvaal prov. E, Berlin For. St. <25°33'S; 30°44'E> 9.xii.1986 (S. Endrödy-Younga) ex horse dung, E-Y:2370, 1♂ in MHNG and 2♂ in TMSA; same data, but gorge <25°32'S; 30°44'E> 21.ix.1986, groundtraps, 32 days, E-Y:2281, 1♀ in MHNG and 1♂, 2♀ in TMSA; same data, but 23.x.1986, groundtraps, 42 days, E-Y:2303, 1♂ in TMSA; same data, but gorge-edge <25°32'S; 30°44'E> 5.ii.1987, ex mule dung, E-Y:2418, 1♂ in TMSA; same data, but Sinkhole <25°31'S; 30°46'E> 20.ix.1986 (S. Endrödy-Younga) groundtraps, 33 days, E-Y:2276, 1♂, 1♀ in TMSA; same data, but 23.x.1986, groundtraps, 42 days, E-Y:2300, 1♂ in MHNG and 2♂, 1♀ in TMSA; Blyderiver Canyon <24°35'S; 30°49'E> 5.v.1981 (S. Endrödy-Younga) groundtraps with faeces bait, 5 days, E-Y:1781, 1♂ in MHNG and 1♂ in TMSA; 30km W Trichardtsdal, 23-30.xii.1985 (S. Peck) downs podocarp forest, carrion trap, P#85-307, FMHD #85-874, 1♀ in FMNH; Pilgrims rest, 19-31.xii.1985 (S. Peck) ex relict nature forest dung trap, P#85-293, FMHD #85-860, 1♂, 2♀ in FMNH and 1♂, 1♀ in MHNG; Transvaal prov., Pietersburg dist., Helmekaar river, 23-30.ix.1961 (N. Leleup) ex humus, 1♀ in TMSA; Uitsoek, Grootkloof ind. forets <25°15'S; 30°33'E> 15.xii.1986 (S. Endrödy-Younga) groundtraps, 53 days, E-Y:2391, 1♂ in TMSA; same data, but 17.xii.1986, ex forest litter after rain, E-Y:2396, 1♂ in TMSA; Lesotho E, Sani Pass Valley, Drakensberg <29°39'S; 29°12'E> 8.iii.1976 (S. Endrödy-Younga & Breytenb.) ex dung collection, E-Y:1054, 2♂ in MHNG and 2♂, 2♀ in TMSA; same data, but (S. Endrödy-Younga) ex horse and cattle dung, E-Y:1054, 1♀ in MHNG and 1♀ in TMSA; Drakensberg, Vann Reenen <28°22'S; 29°23'E> xi.1926 (R. E. Turner) 1♂ in BMNH.

Distribution. Lesotho; Republic of South Africa.

Description. Length 0.9-1.3 mm; width 0.6-0.8 mm. Body usually entirely dark brown or blackish, with paler legs and mouth parts; pronotum and elytral disc sometimes paler. Dorsal pubescence fairly uniform, sparser on elytron, becoming denser near apical margin of abdominal tergite 7. Metasternal setae uniform, shorter than those on prosternum. Pubescence of abdominal sternites 4-7 uniform, except for a pair of long setae near medioapical margins. Puncturation fine on anterior portion of hypomeron; median area of metasternum impunctate. Frons slightly raised above level of vertex. Anterior frontal edge not carinate, evenly arcuate. Entire frontal impression shallow or indistinct. Eye strongly convex, with highest point below level of vertex. Temple similar to that in Fig. 2g. Submentum weakly convex. Antenna (Fig. 70a) without patches of sensilla; antennomere 3 slightly asymmetrical, 4 strongly asymmetrical. Pronotal disc (Fig. 70f) flat along lateral edge, deeply depressed along median groove latter deep, parallel-sided. Anterior prosternal margin not bordered by longitudinal ridges. Protrochanter with transverse ridge. Lateral portion of prepectal

ridge straight. Scutellum similar to that in Fig. 2b. Elytron slightly narrowed at base; base abruptly inclined, overhanging. Elytral disc flat along lateral edge; latter straight in dorsal view; apical margin straight or convex near suture; inner apical angle obtuse. Metasternal median ridge fine, low. Abdominal tergite 3 slightly vaulted transversally. Sternites 2 and 3 with median processes as in Fig. 2l. Sternite 4 flat at base, then slightly vaulted transversally.

Ratios: AL 1.7; EL 1.5-1.6; ET 1.55-1.65; EW 1.2; EY 2.5; GT 2.1; GW 1.6-1.7; HW 1.6-1.7; ML 1.4; MP 1.7; PT 1.8-1.9; SP♂ 2.5-3.0; SP♀ 3.3-3.5; TPF 6.5-10.0.

♂. Protarsal segment 1 bearing adhesive setae. Mesofemur (Fig. 69f) longer than metafemur (Fig. 69d). Mesotibia (Fig. 69c) as long as metatibia (Fig. 69e), with peg-like setae arranged in a double row, and grouped in a field near apex. Peg-like setae arranged in a single row on mesotrochanter (Fig. 69f), metatrochanter (Fig. 69d) and metatibia; absent from protibia. Apex of abdominal tergite 8 as in Fig. 69h. Sternite 8 as in Fig. 69g. Aedeagus as in Fig. 69a, b.

♀. Medioapical projection of abdominal tergite 8 as in Fig. 70e, g. Sternite 8 as in Fig. 70d. Genital segment as in Fig. 70b, c.

Comments. See discussion under *M. nanus*.

DISCUSSION

The Afrotropical *Megarthrus* occur in three geographically separated areas (Fig. 1). Equatorial East Africa, especially the mountainous areas near Lake Victoria, has 27 species (71%). A second area with relatively high species diversity (9 species) is in Ethiopia. None of the latter species has been found outside of Ethiopia and none of the former occurs in Ethiopia. With two species from Cameroon and one species in the Republic of South Africa, the genus is depauperate in West and South Africa. The genus has not been found so far in Madagascar and Mascarene Islands.

The altitudinal records indicate highest diversity of the Equatorial East African *Megarthrus* between 1700-2700m (19 species); two species are present only above 2900m and three species at 900m; none below 900m. The Ethiopian species appear to be confined to higher altitudes, between 2700-4000m. The single South African species, *M. zulu*, has been found between 400-2000m.

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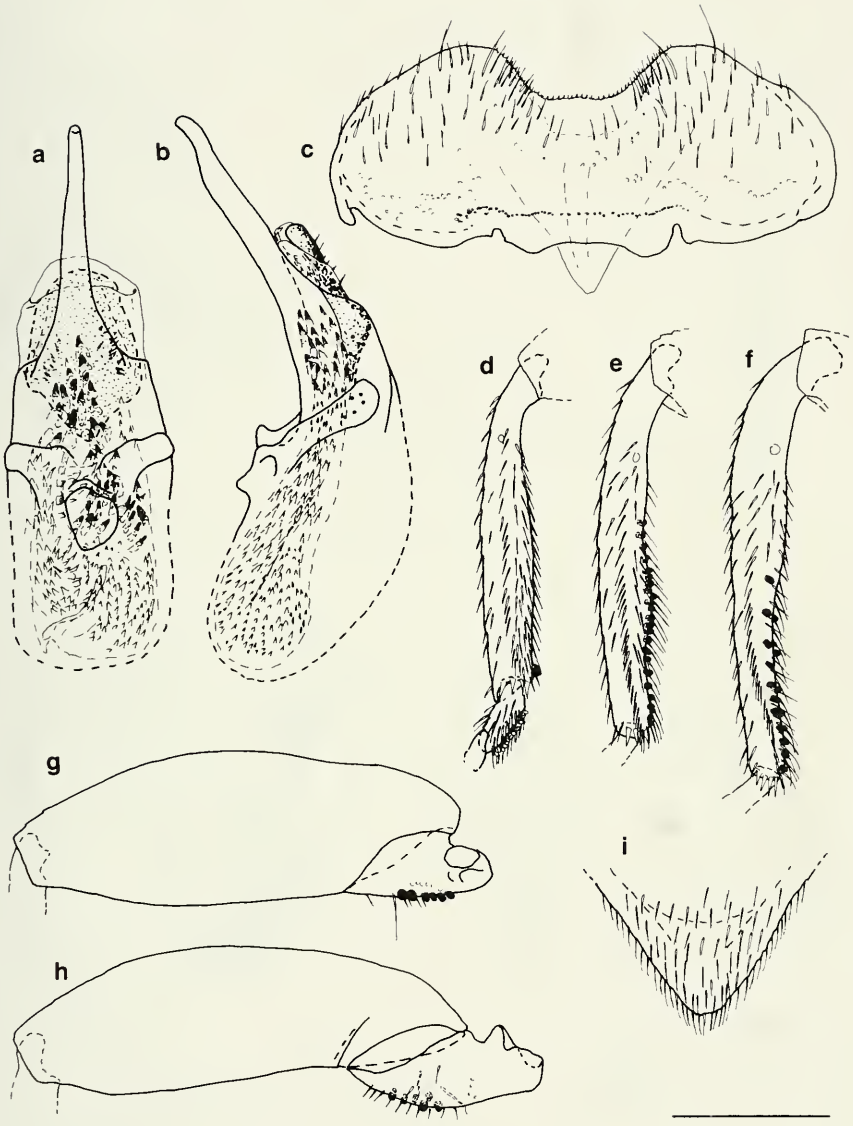

FIG. 3

Megarthrus abessinus, male; a, b: aedeagus, ventral and lateral; c: abdominal sternite 8; d: protibia and protarsomere 1; e: mesotibia; f: metatibia; g: mesofemur and mesotrochanter; h: metafemur and metatrochanter; i: apex of abdominal tergite 8, dorsal. Scale bar = 0.2 mm.

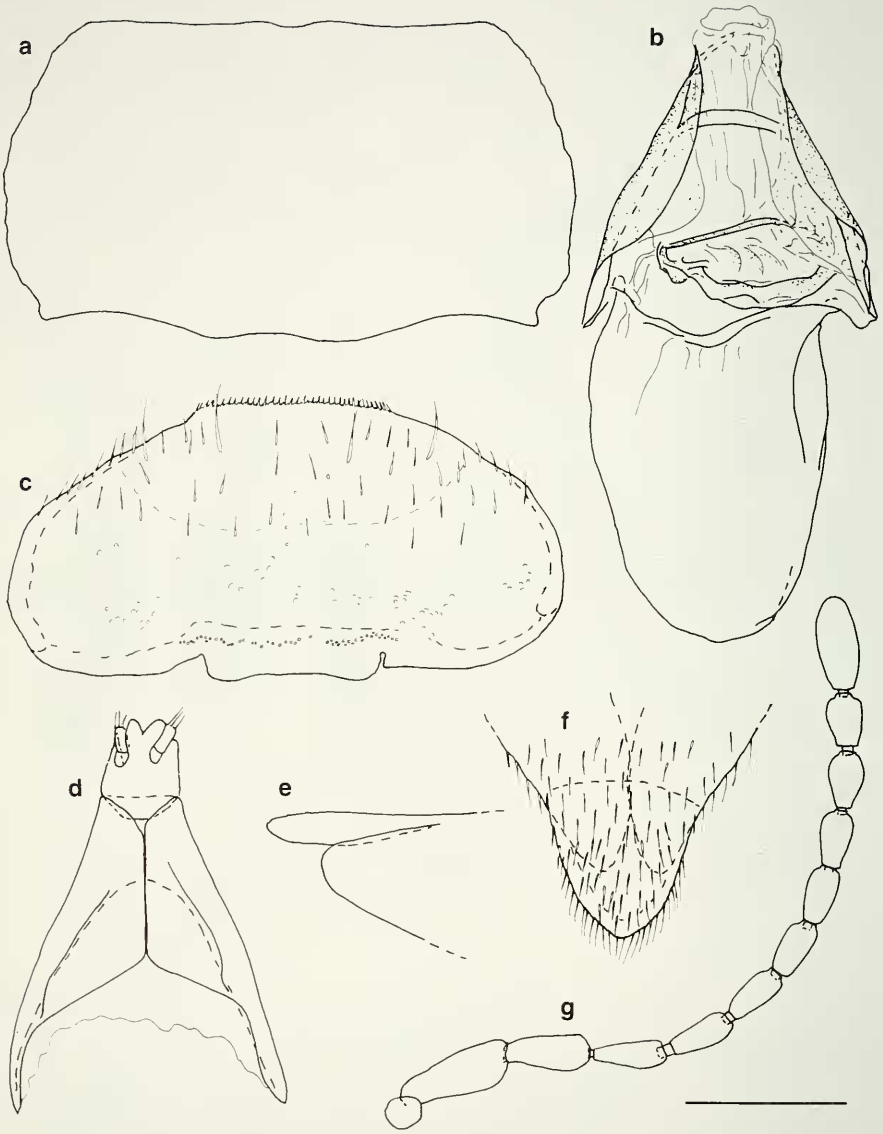

FIG. 4

Megarthrus abessinus; a: pronotum; b, d: female, genital segment, tergites (b) and sternites (d); c: female, abdominal sternite 8; e, f: female, apex of abdominal tergite 8, lateral and dorsal; g: antenna. Scale bar = 0.2 mm.

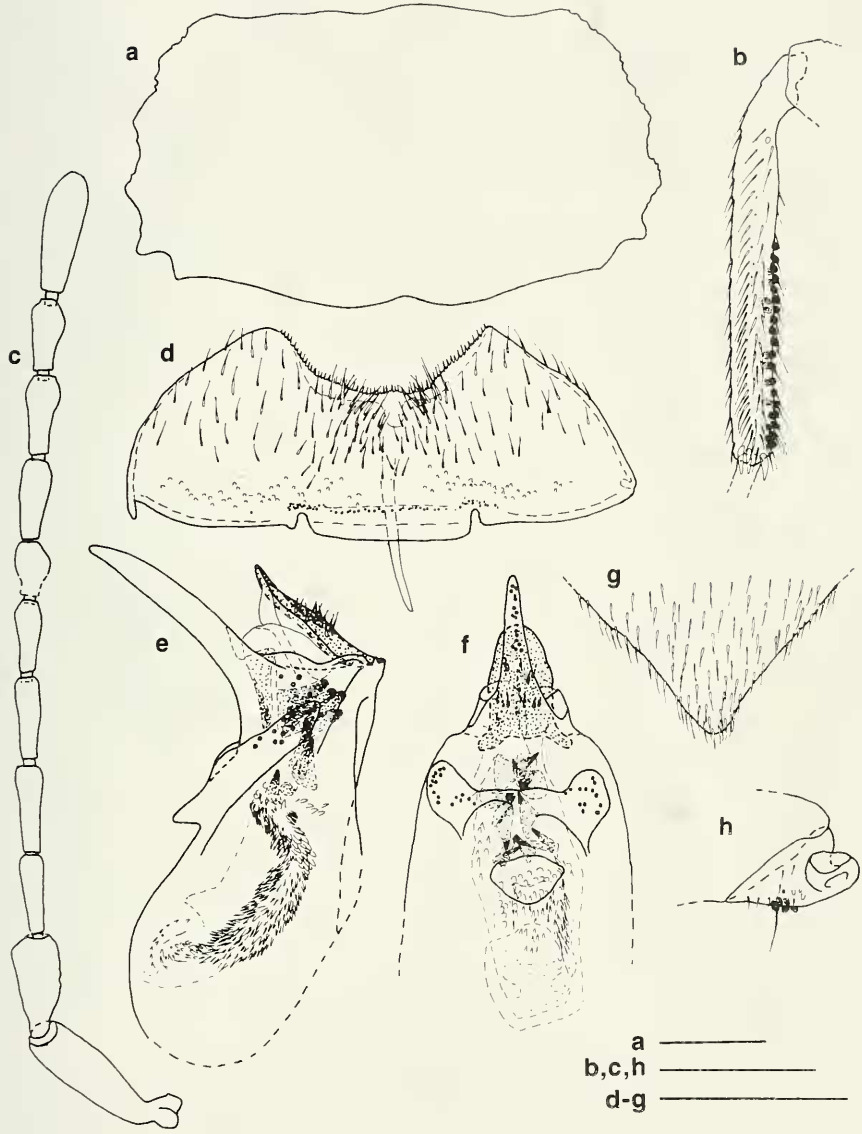

FIG. 5

Megarthrus africanus; a: pronotum; b: male, mesotibia; c: antenna (antennomere 7 deformed); d: male, abdominal sternite 8; e, f: aedeagus, ventral and lateral; g: male, apex of abdominal tergite 8, dorsal; h: male, mesotrochanter. Scale bars = 0.2 mm.

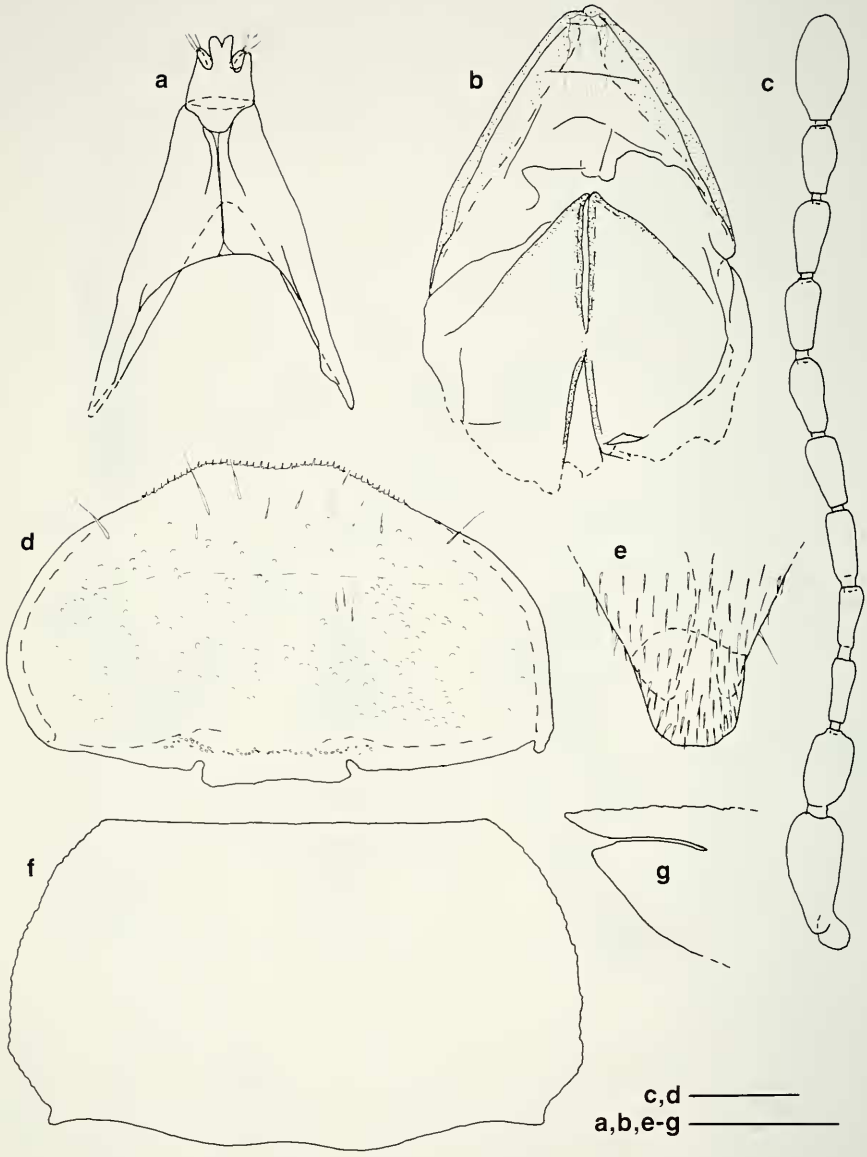

FIG. 6

Megarthrus apicicornis; a, b: female, genital segment, sternites (a) dorsal and tergites (b); c: antenna; d: female, abdominal sternite 8; e, g: female, apex of abdominal tergite 8, dorsal and lateral; f: pronotum. Scale bars = 0.2 mm.

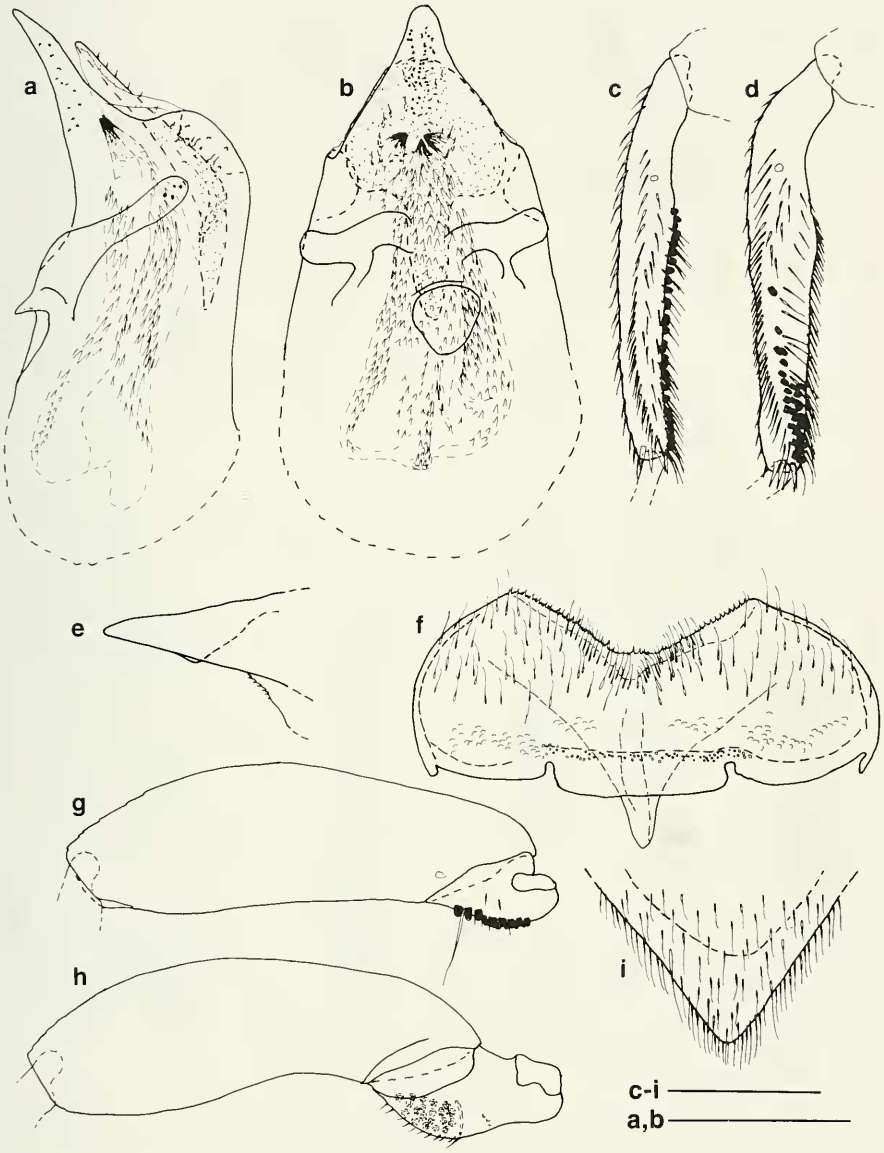

FIG. 7

Megarthrus bantu, male; a, b: aedeagus, lateral and ventral; c: mesotibia; d: metatibia; e, i: apex of abdominal tergite 8, lateral and dorsal; f: abdominal sternite 8; g: mesofemur and mesotrochanter; h: metafemur and metatrochanter. Scale bars = 0.2 mm.

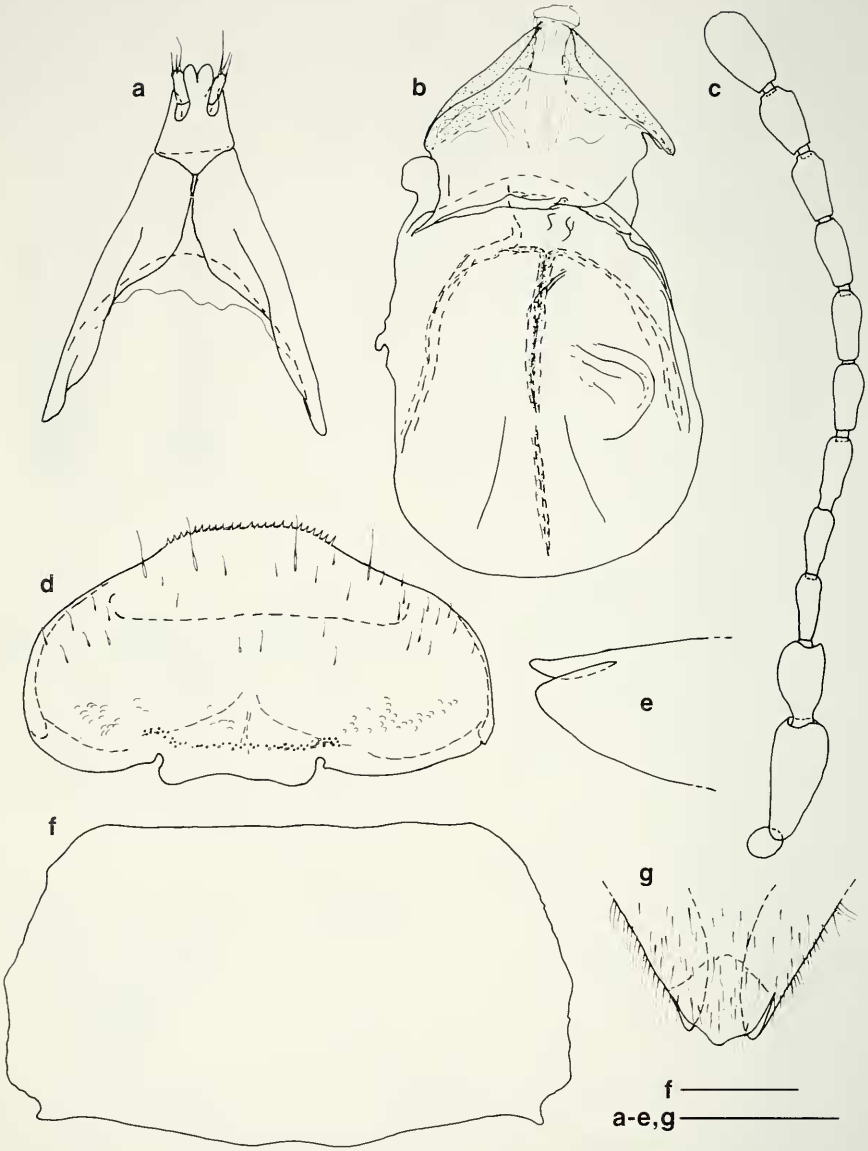

FIG. 8

Megarthrus bantu: a, b: female, genital segment, sternites (a) and tergites (b); c: antenna; d: female, abdominal sternite 8; e, g: female, apex of abdominal tergite 8, lateral and dorsal; f: pronotum. Scale bars = 0.2 mm.

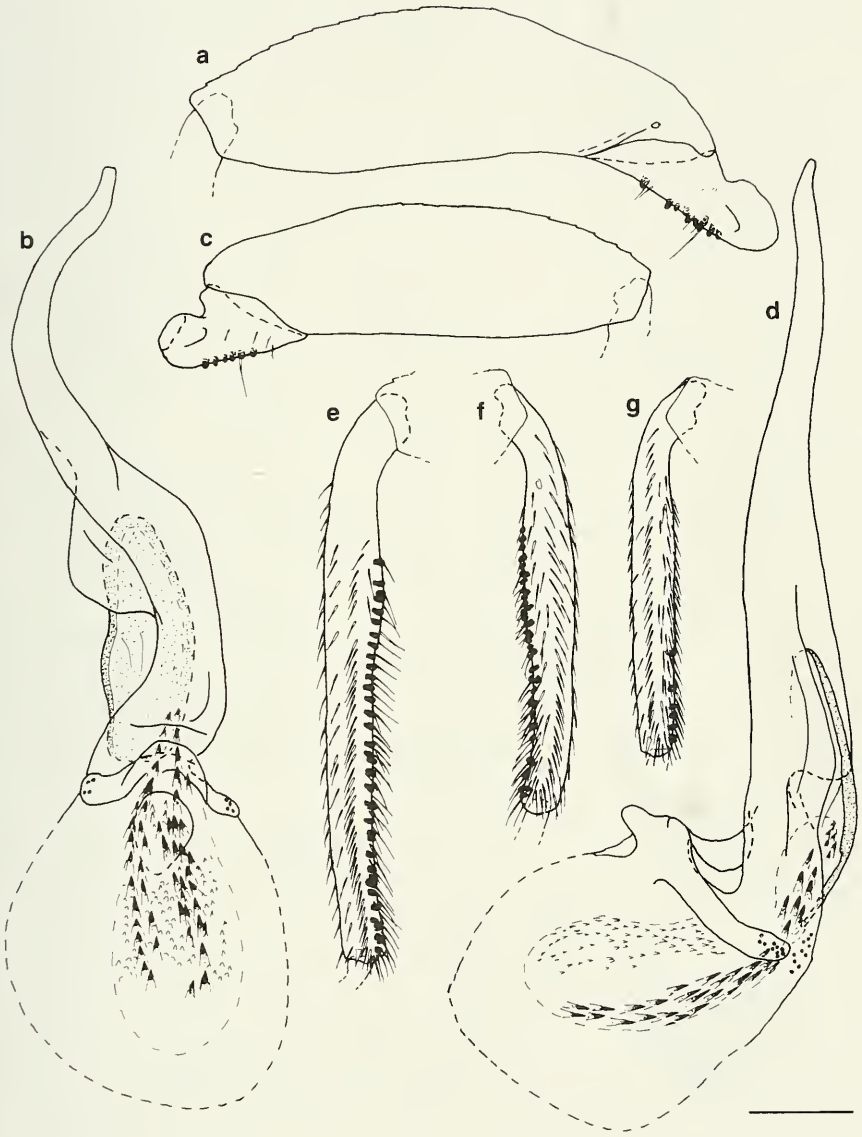

FIG. 9

Megarthrus basilewskyi, male; a: metafemur and metatrochanter; b, d: aedeagus, ventral and lateral; c: mesofemur and mesotrochanter; e: metatibia; f: mesotibia; g: protibia. Scale bar = 0.2 mm.

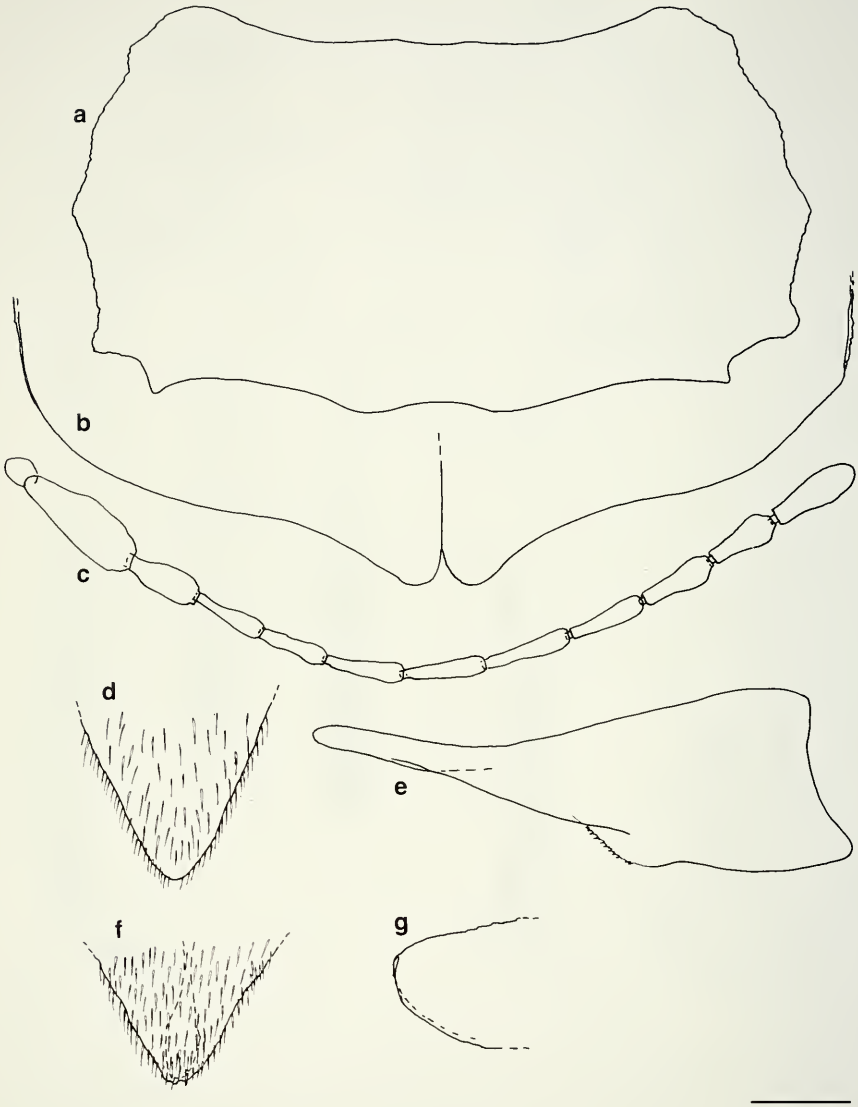

FIG. 10

Megarthrus basilewskyi; a: pronotum; b: female, apical contour of elytra; c: antenna; d, e: male, abdominal tergite 8, entire (e) lateral and apex (d) dorsal; f, g: female, abdominal tergite 8, dorsal and lateral. Scale bar = 0.2 mm.

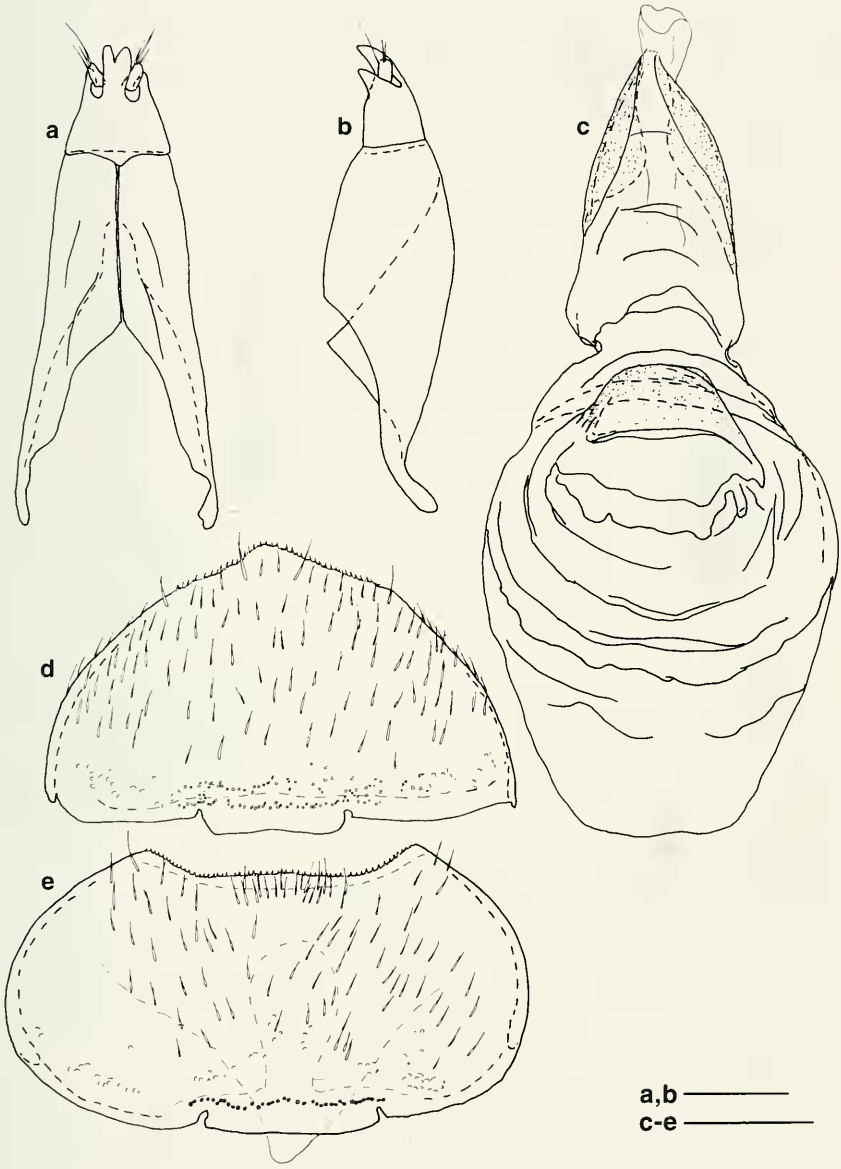

FIG. 11

Megarthrus basilewskyi; a-c: female, genital segment, sternites (a) dorsal, (b) lateral and tergites (c); d, e: abdominal sternite 8, female and male. Scale bars = 0.2 mm.

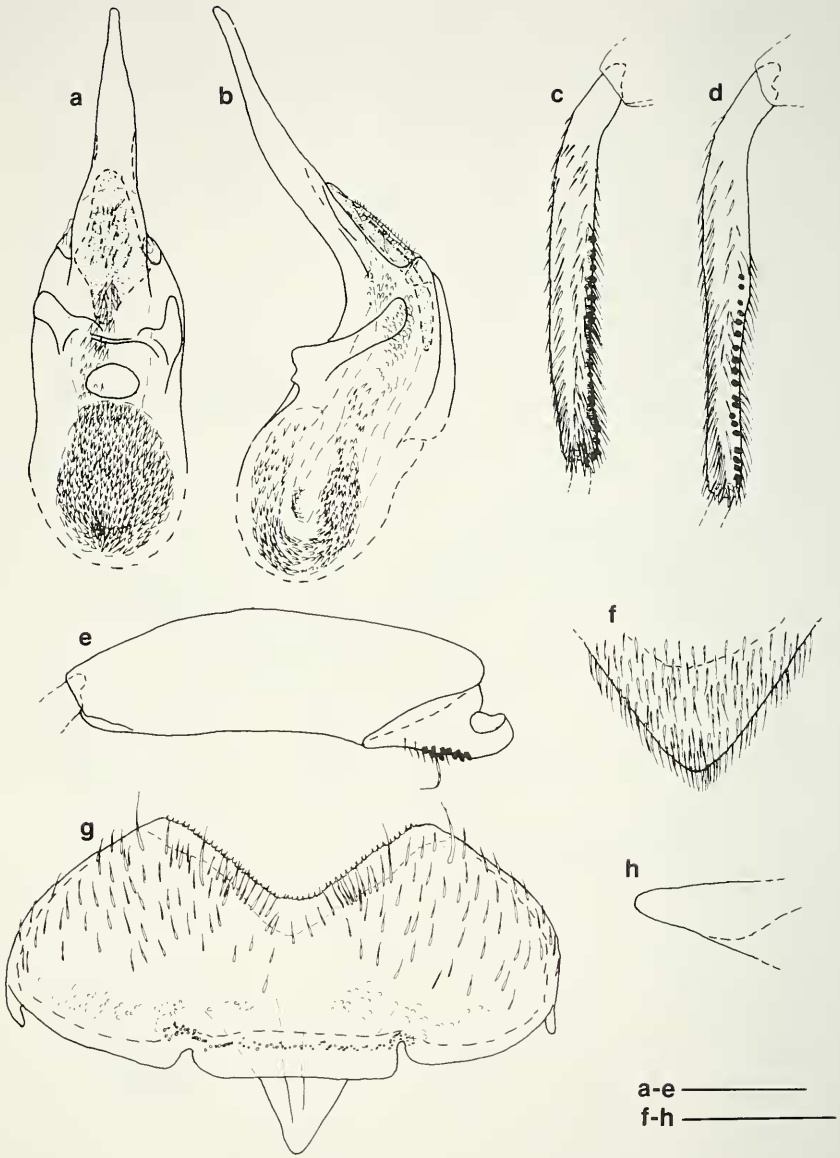

FIG. 12

Megarthrus clarkei, male; a, b: aedeagus, ventral and lateral; c: mesotibia; d: metatibia; e: mesofemur and mesotrochanter; f, h: apex of abdominal tergite 8, dorsal and lateral; g: abdominal sternite 8. Scale bars = 0.2 mm.

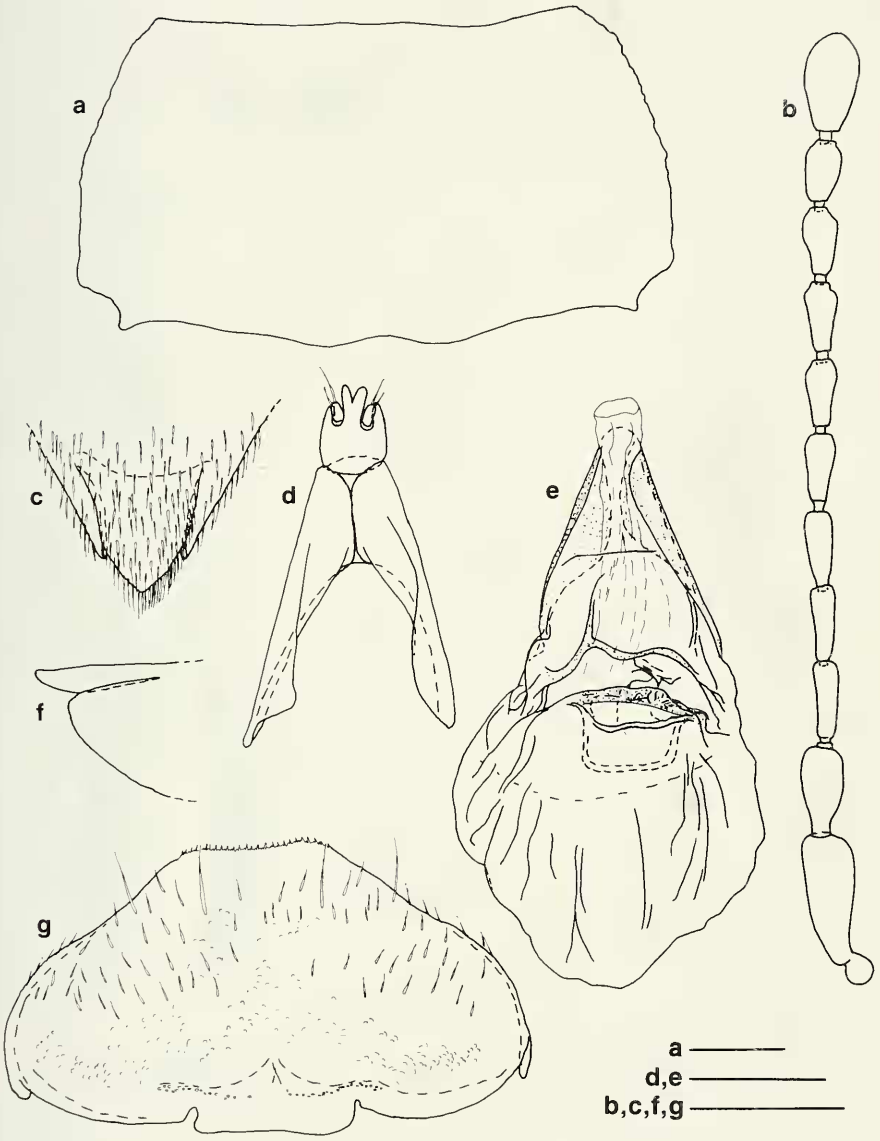

FIG. 13

Megarthrus clarkei; a: pronotum; b: antenna; c, f: female, apex of abdominal tergite 8, dorsal and lateral; d, e: female, genital segment, sternites (d) and tergites (e); g: female, abdominal sternite 8. Scale bars = 0.2 mm.

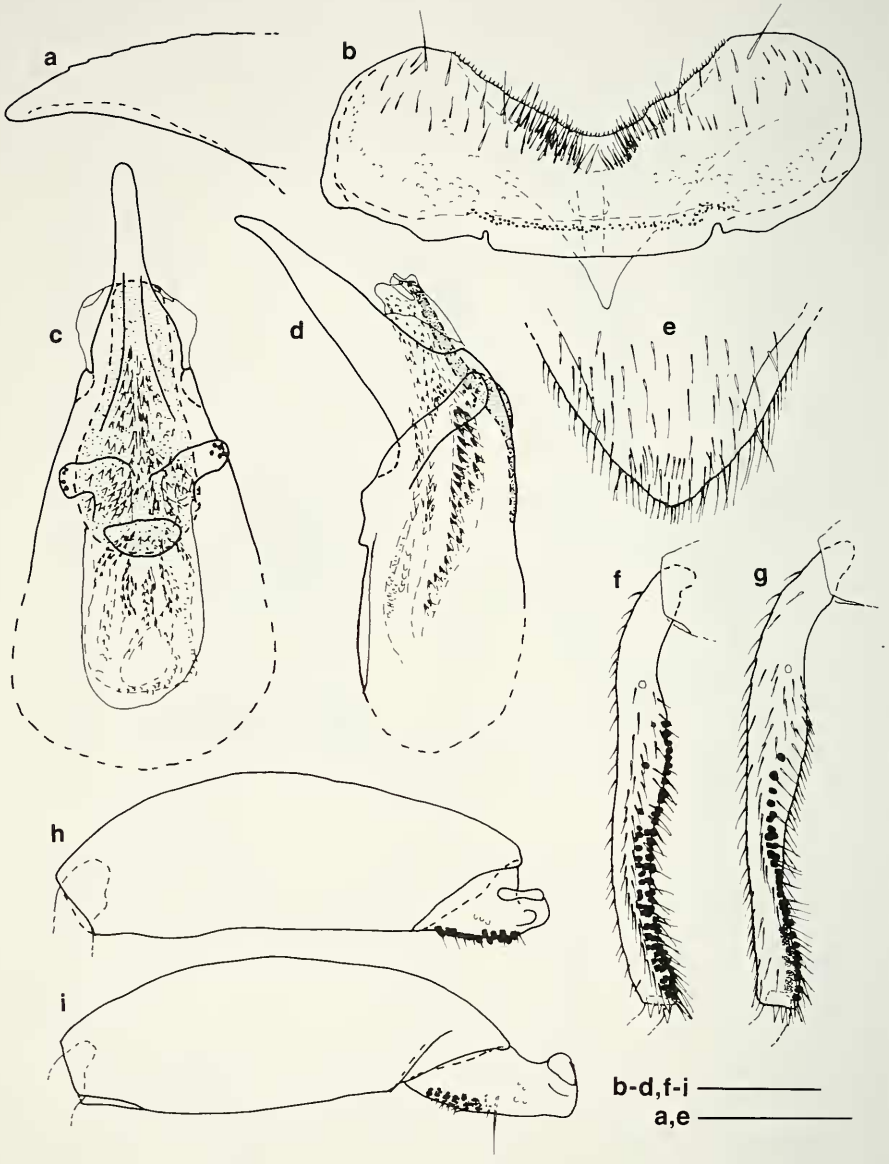

FIG. 14

Megarthrus congoensis, male; a-e: apex of abdominal tergite 8, lateral and dorsal; b: abdominal sternite 8; c, d: aedeagus, ventral and lateral; f: mesotibia; g: metatibia; h: mesofemur and mesotrochanter; i: metafemur and metatrochanter. Scale bars = 0.2 mm.

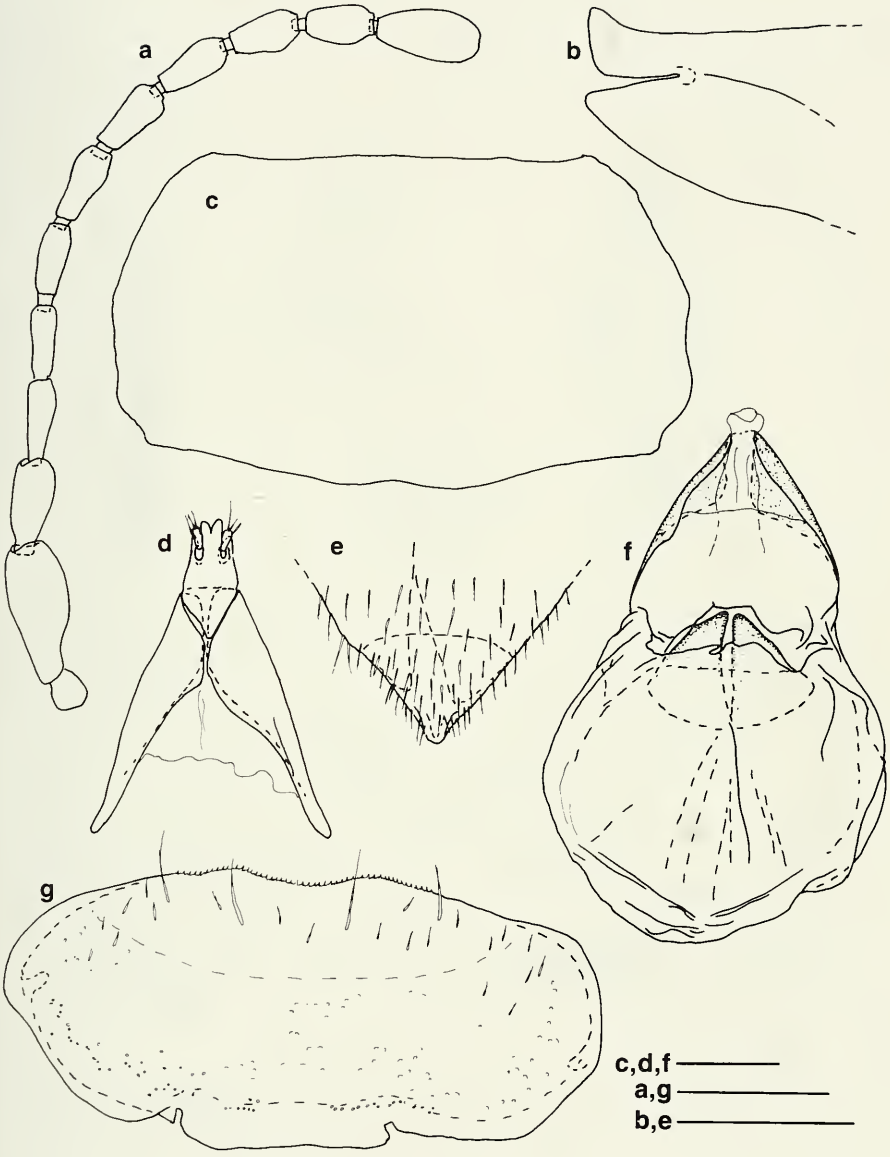

FIG. 15

Megarthrus congoensis; a: antenna; b, e: female, apex of abdominal tergite 8, lateral and dorsal; c: pronotum; d, f: female, genital segment, sternites (d) and tergites (f); g: female, abdominal sternite 8. Scale bars = 0.2 mm.

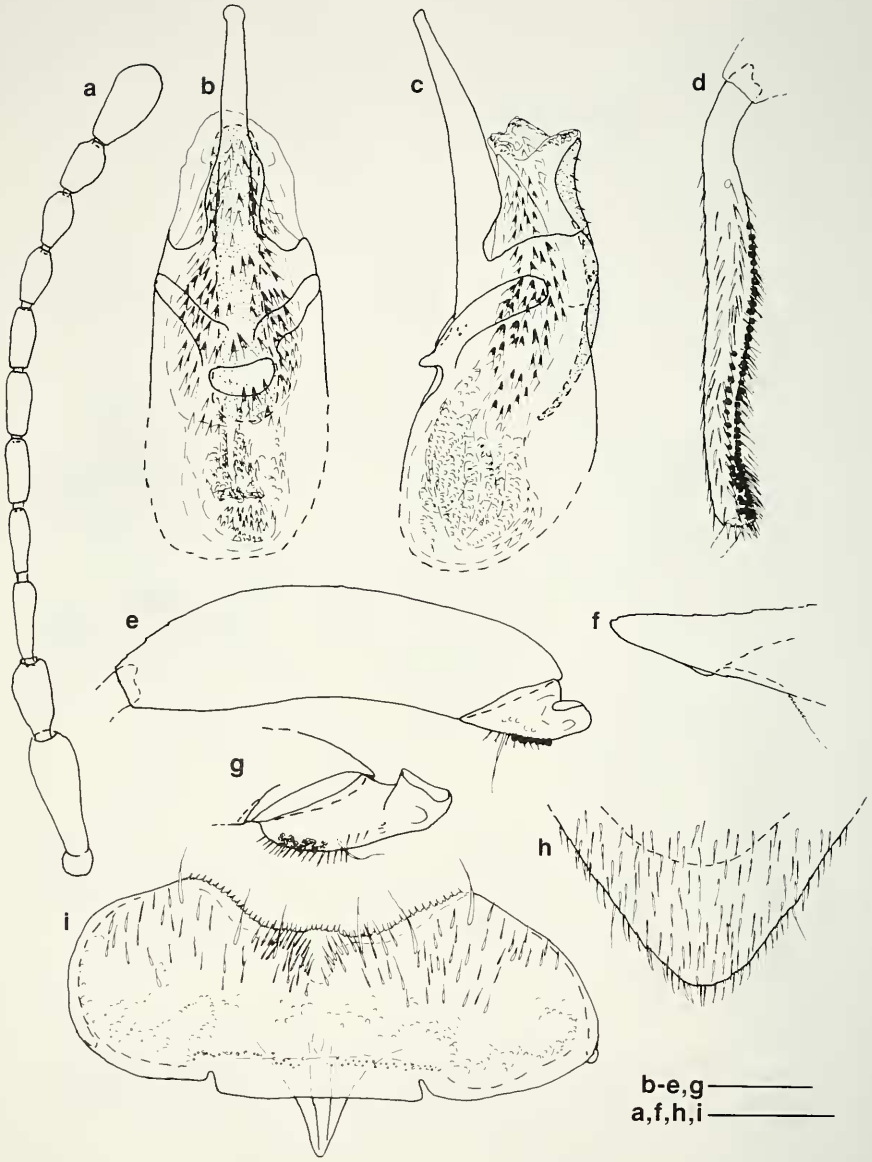

FIG. 16

Megarthrus dominicae; a: antenna; b, c: aedeagus, ventral and lateral; d: male, mesotibia; e: male, mesofemur and mesotrochanter; f, h: male, apex of abdominal tergite 8, lateral and dorsal; g: male, metatrochanter; i: male, abdominal sternite 8. Scale bars = 0.2 mm.

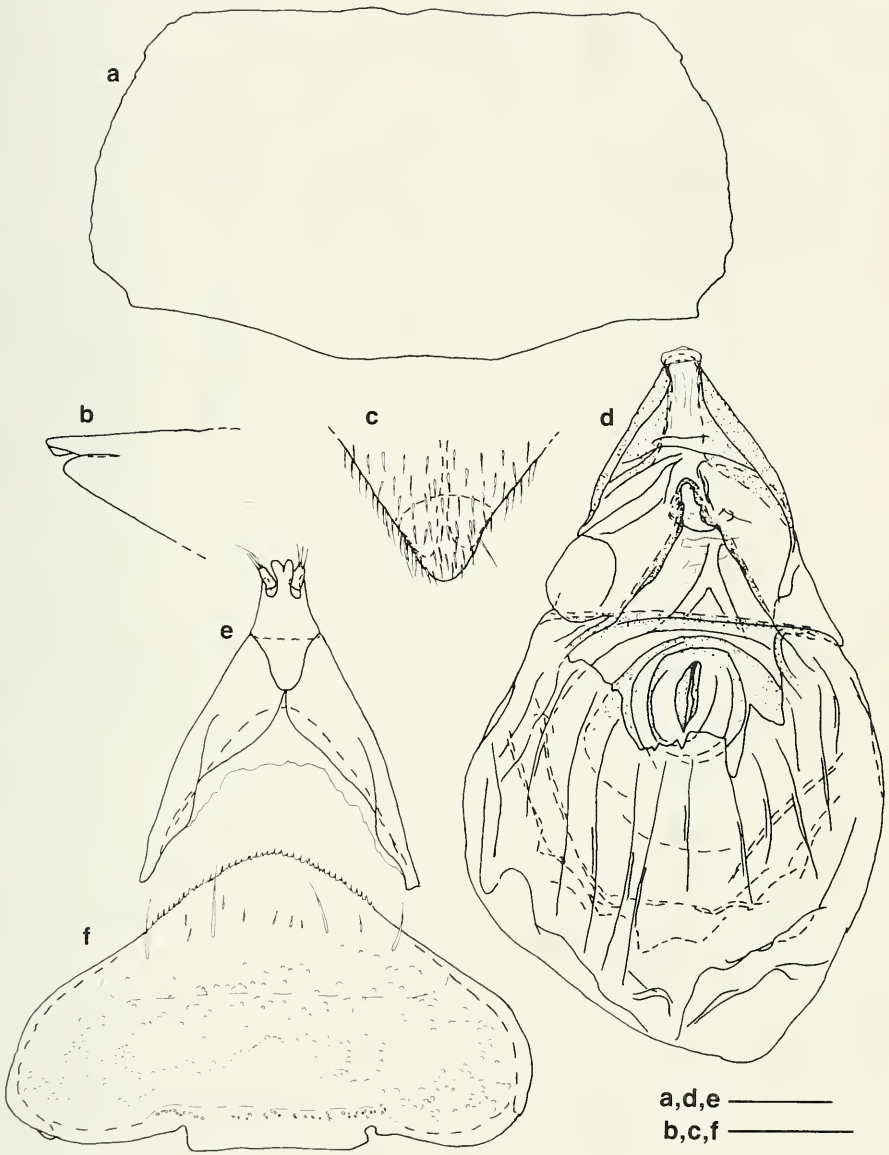

FIG. 17

Megarthrus dominicae; a: pronotum; b, c: female, apex of abdominal tergite 8, lateral and dorsal; d, e: female, genital segment, tergites (d) and sternites (e); f: female, abdominal sternite 8. Scale bars = 0.2 mm.

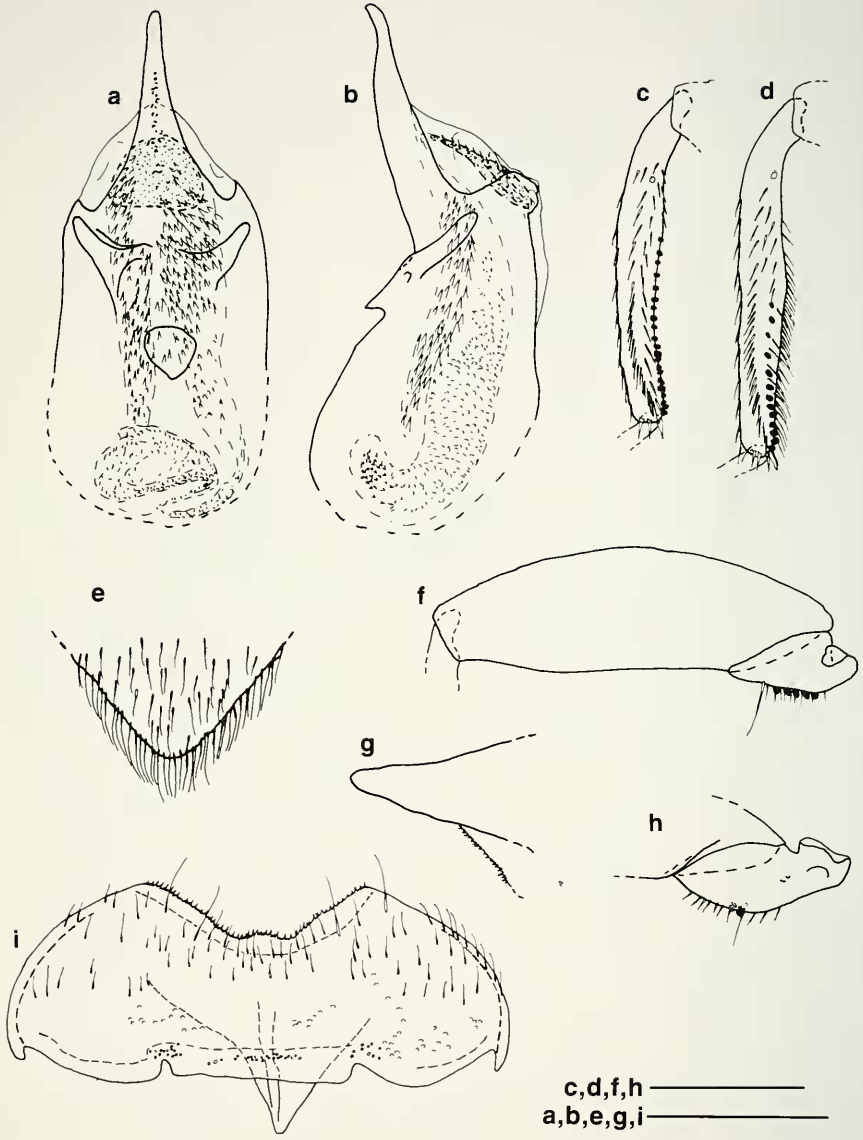

FIG. 18

Megarthrus falasha, male; a, b: aedeagus, ventral and lateral; c: mesotibia; d: metatibia; e, g: apex of abdominal tergite 8, dorsal and lateral; f: mesofemur and mesotrochanter; h: metatrochanter; i: abdominal sternite 8 . Scale bars = 0.2 mm.

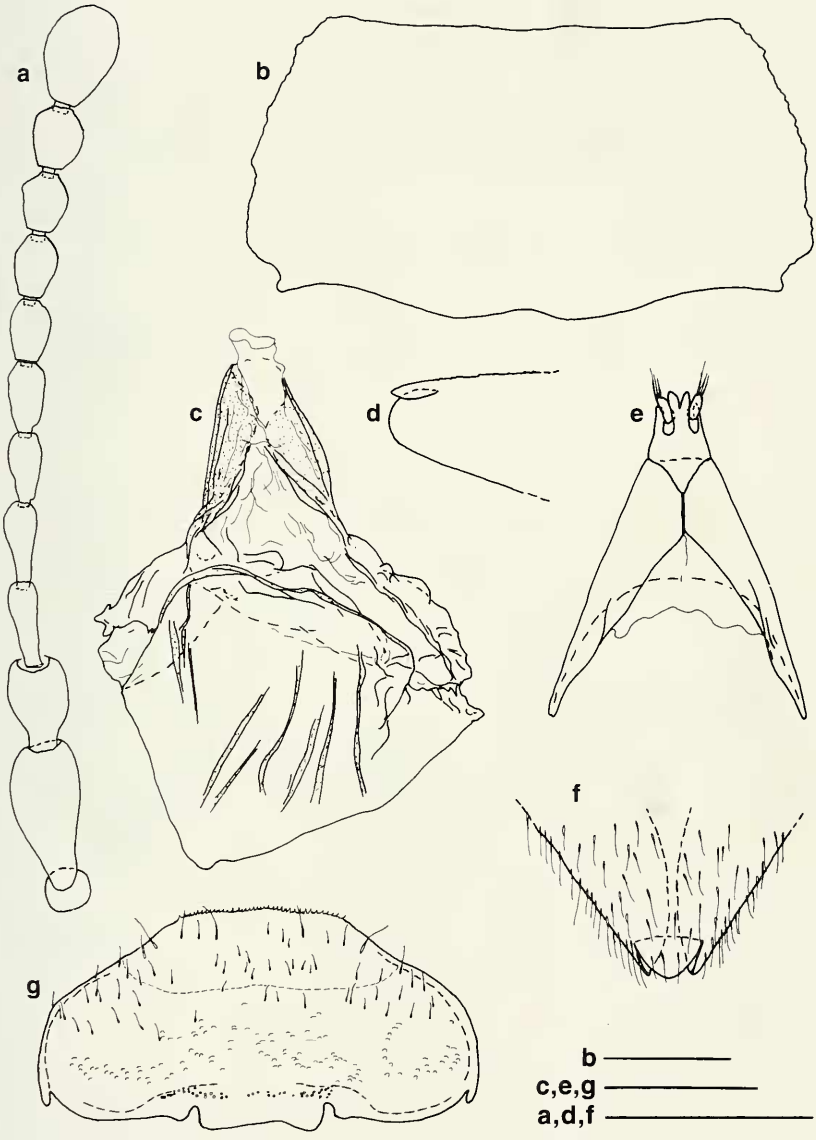

FIG. 19

Megarthrus falasha; a: antenna; b: pronotum; c, e: female, genital segment, tergites (c) and sternites (e); d, f: female, apex of abdominal tergite 8, lateral and dorsal; g: female, abdominal sternite 8. Scale bars = 0.2 mm.

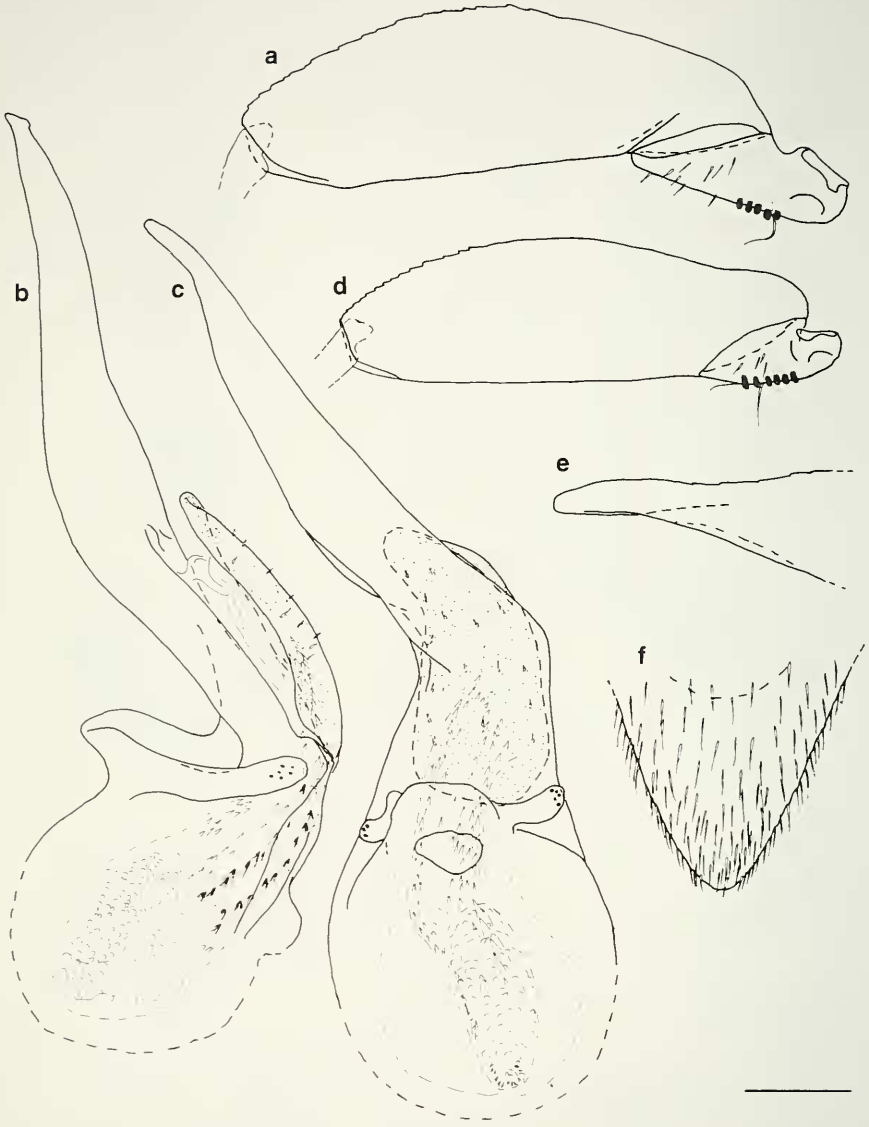

FIG. 20

Megarthrus gigas, male; a: metafemur and metatrochanter; b, c: aedeagus, lateral and ventral; d: mesofemur and mesotrochanter; e, f: apex of abdominal tergite 8, lateral and dorsal. Scale bar = 0.2 mm.

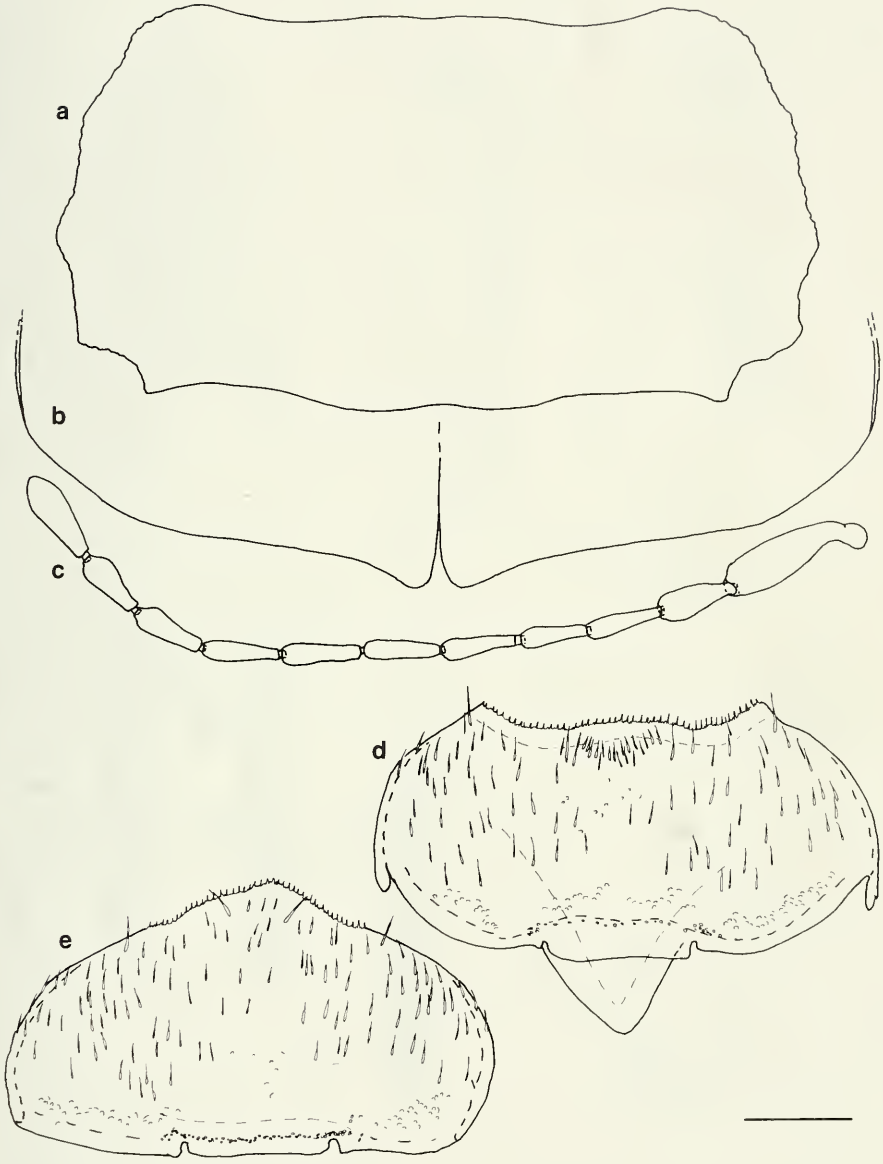

FIG. 21

Megarthrus gigas; a: pronotum; b: female, apical contour of elytra; c: antenna; d, e: abdominal sternite 8, male (d) and female (e). Scale bar = 0.2 mm.

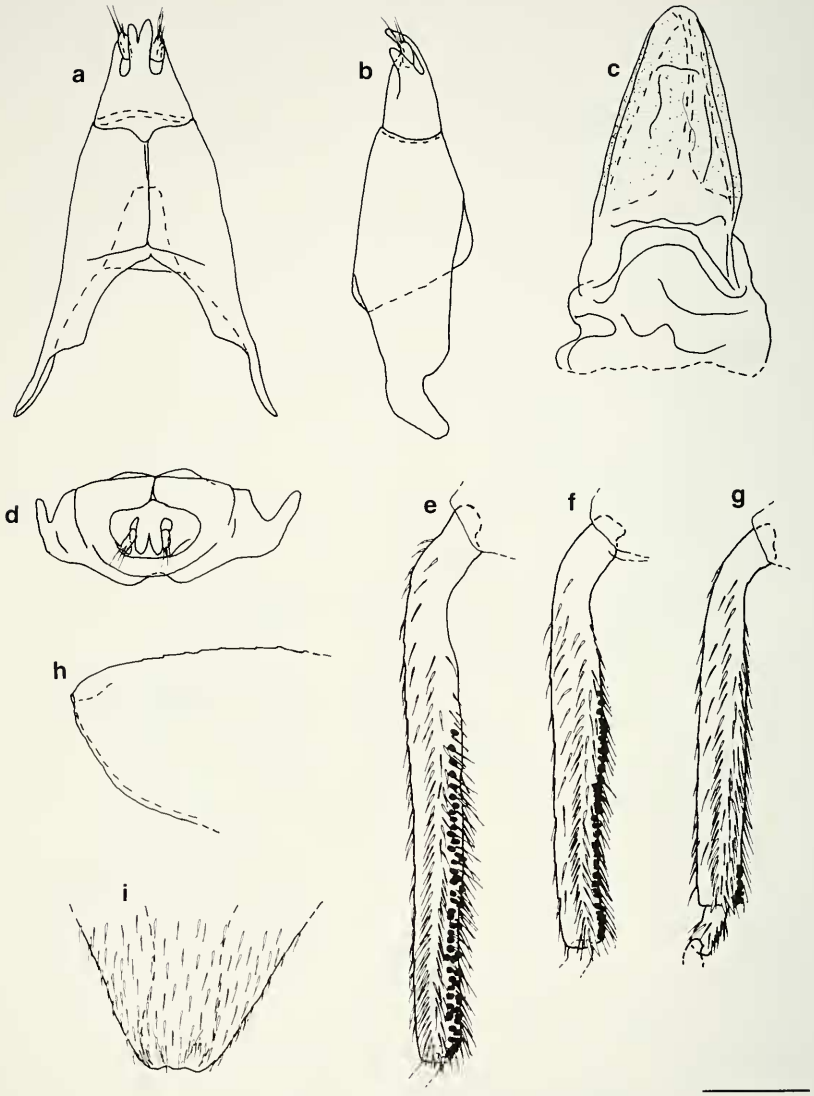

FIG. 22

Megarthrus gigas; a-d: female, genital segment, sternites (a) dorsal, (b) lateral, (d) posterior and tergites (c) ventral; e: male, metatibia; f: male, mesotibia; g: male, protibia and protarsomere 1; h, i: female, apex of abdominal tergite 8, lateral and dorsal. Scale bar = 0.2 mm.

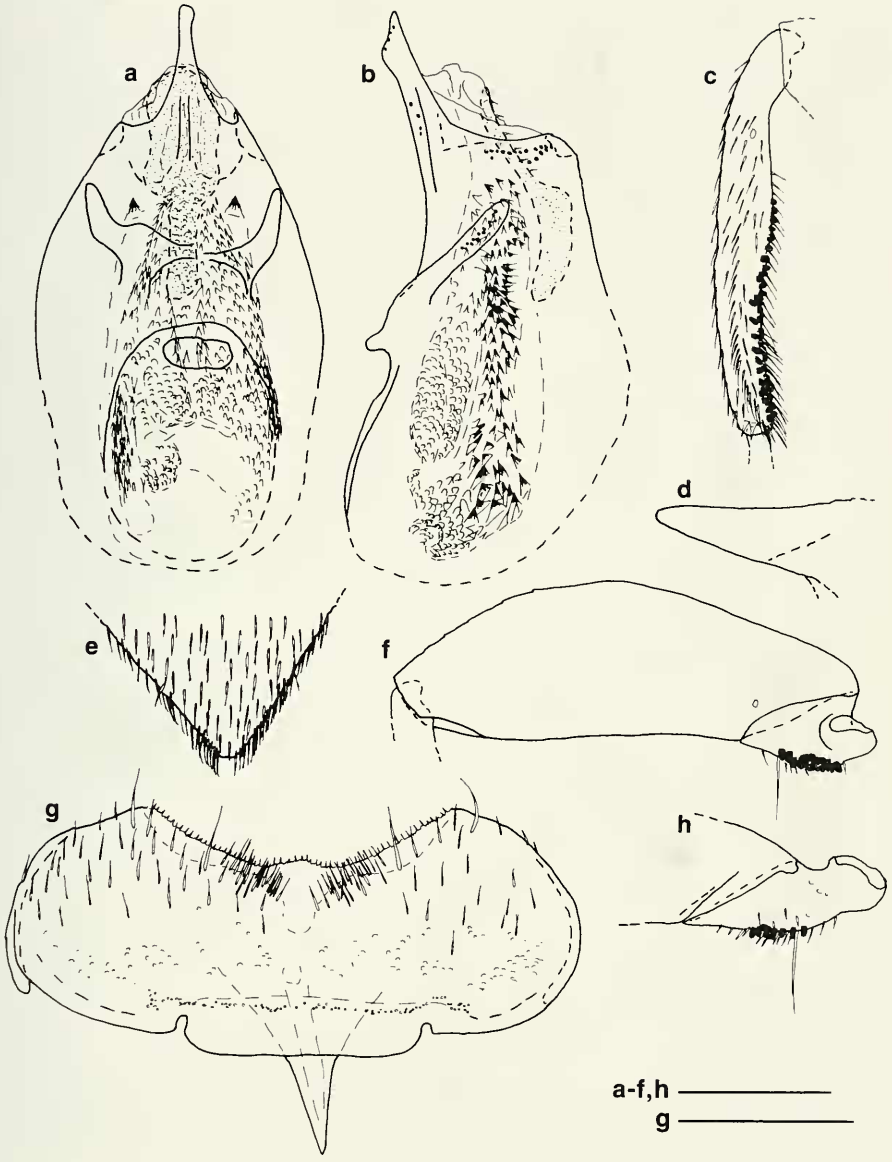

FIG. 23

Megarthrus horticola, male; a, b: aedeagus, ventral and lateral; c: mesotibia; d, e: apex of abdominal tergite 8, lateral and dorsal; f: mesofemur and mesotrochanter; g: abdominal sternite 8; h: metatrochanter. Scale bars = 0.2 mm.

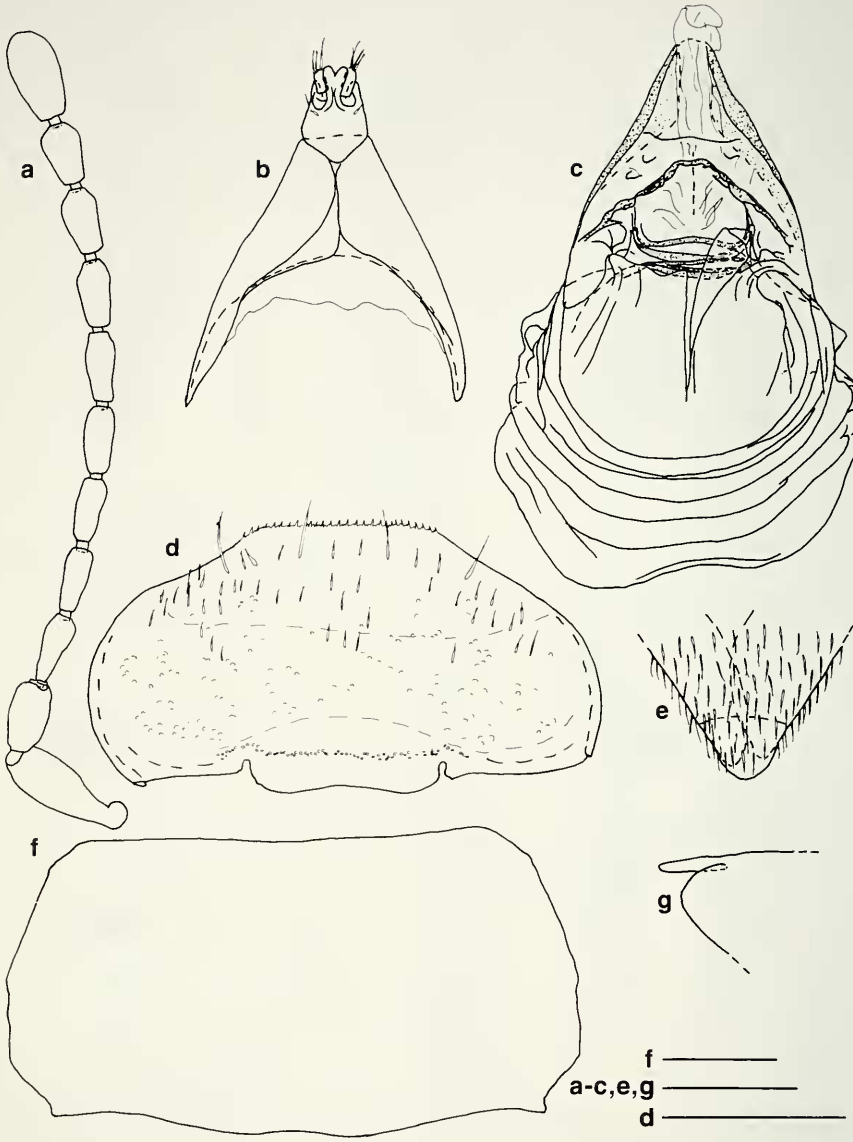

FIG. 24

Megarthrus horticola; a: antenna; b c: female, genital segment, sternites (b) and tergites (c); d: female, abdominal sternite 8; e, g: apex of abdominal tergite 8, dorsal and lateral; f: pronotum. Scale bars = 0.2 mm.

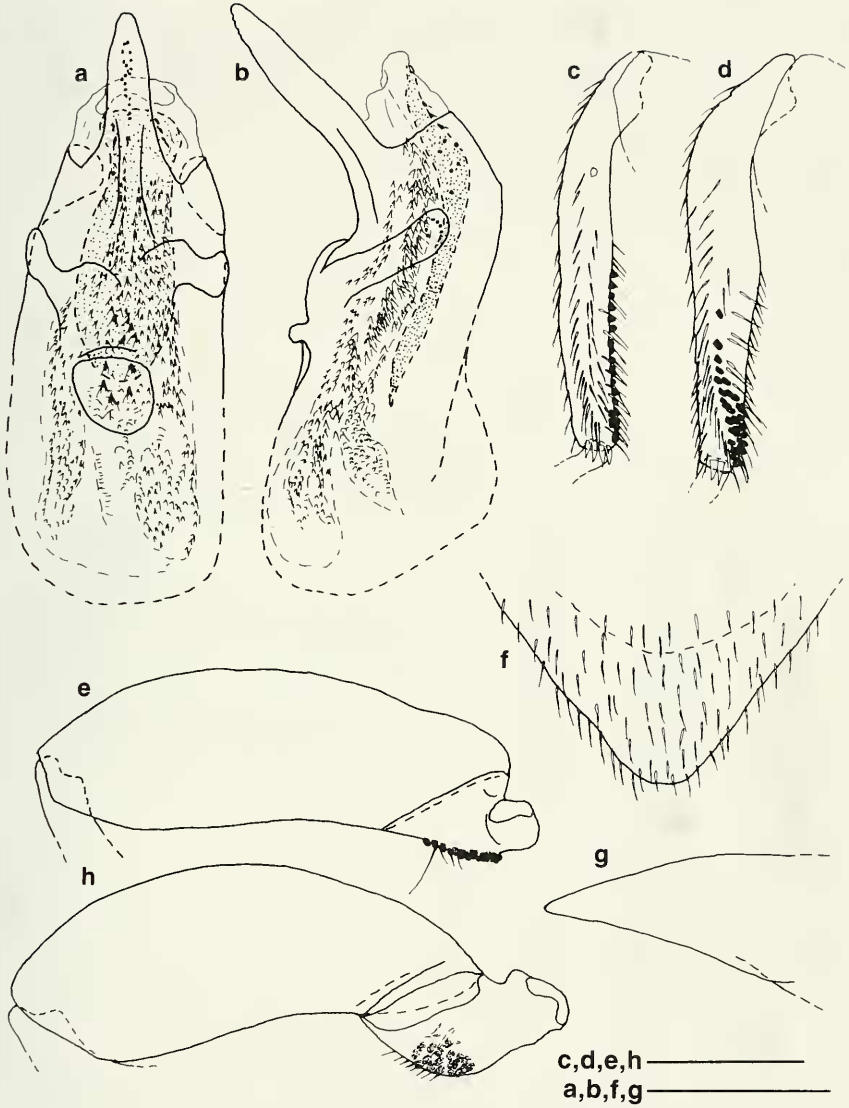

FIG. 25

Megarthrus hutu, male; a, b: aedeagus, ventral and lateral; c: mesotibia; d: metatibia; e: mesofemur and mesotrochanter; f, g: apex of abdominal tergite 8, dorsal and lateral; h: metafemur and metatrochanter. Scale bars = 0.2 mm.

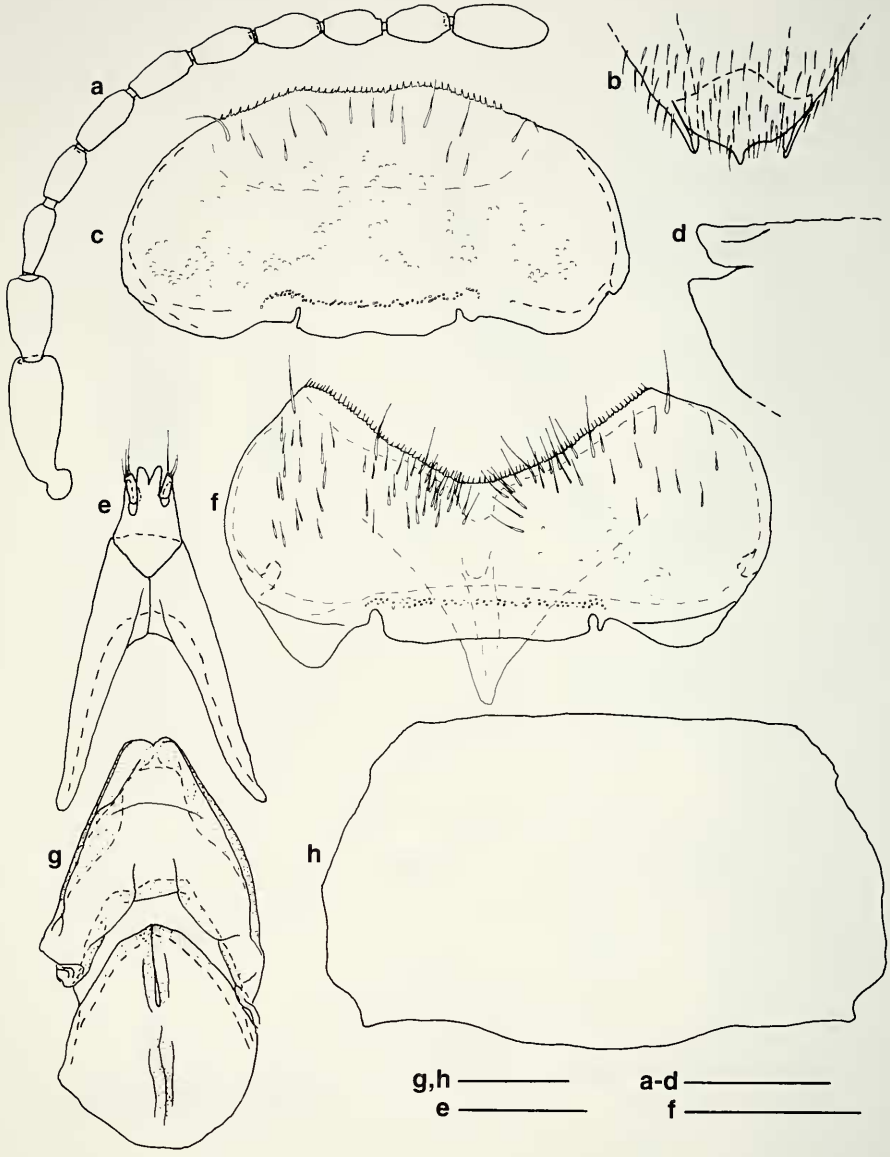

FIG. 26

Megarthrus hutu; a: antenna; b, d: female, apex of abdominal tergite 8, dorsal and lateral; c, f: abdominal sternite 8, female (c) and male (f); e, g: female, genital segment, sternites (e) and tergites (g); h: pronotum. Scale bars = 0.2 mm.

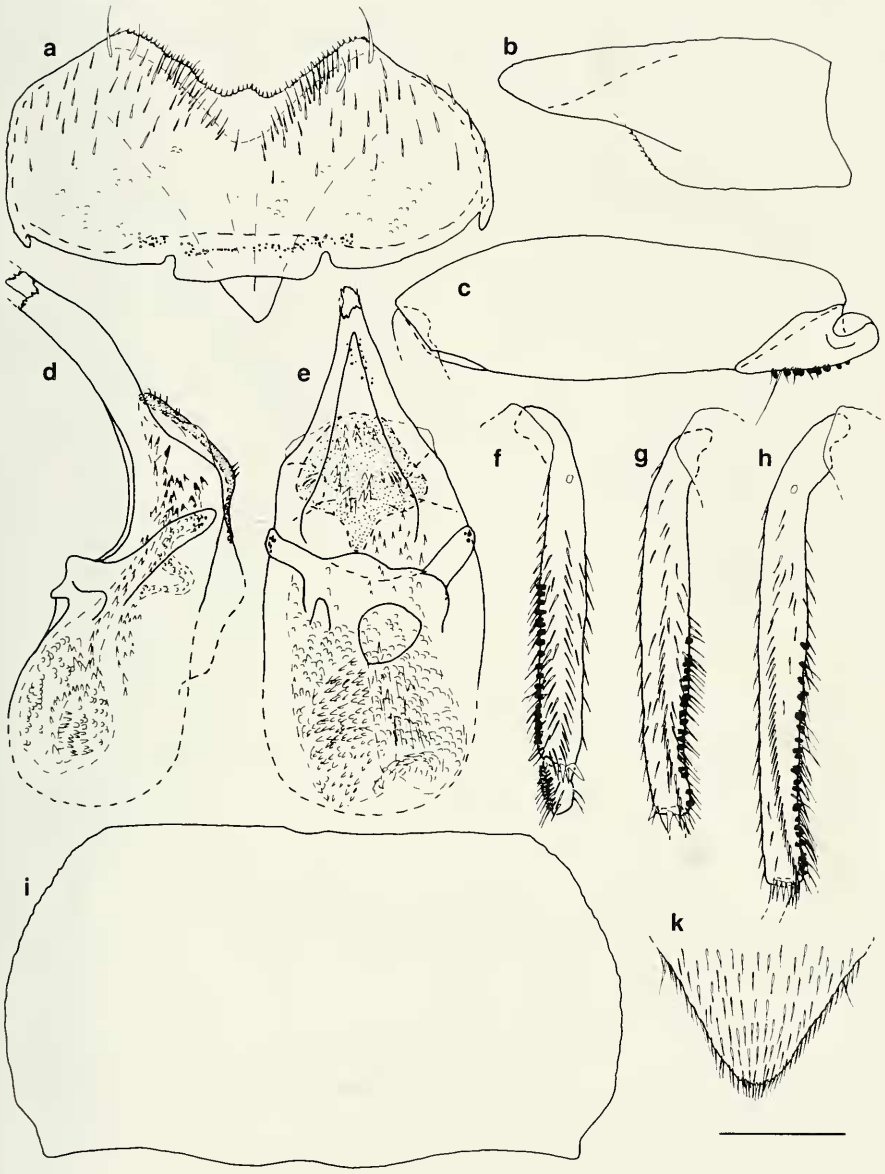

FIG. 27

Megarthrus magnicaudatus; a: male, abdominal sternite 8; b, k: male, abdominal tergite 8, entire (b) lateral and apex (k) dorsal; c: male, mesofemur and mesotrochanter; d, e: aedeagus, lateral and ventral (apex broken); f: male, protibia and protarsomere 1; g: male, mesotibia; h: male, metatibia; i: pronotum. Scale bar = 0.2 mm.

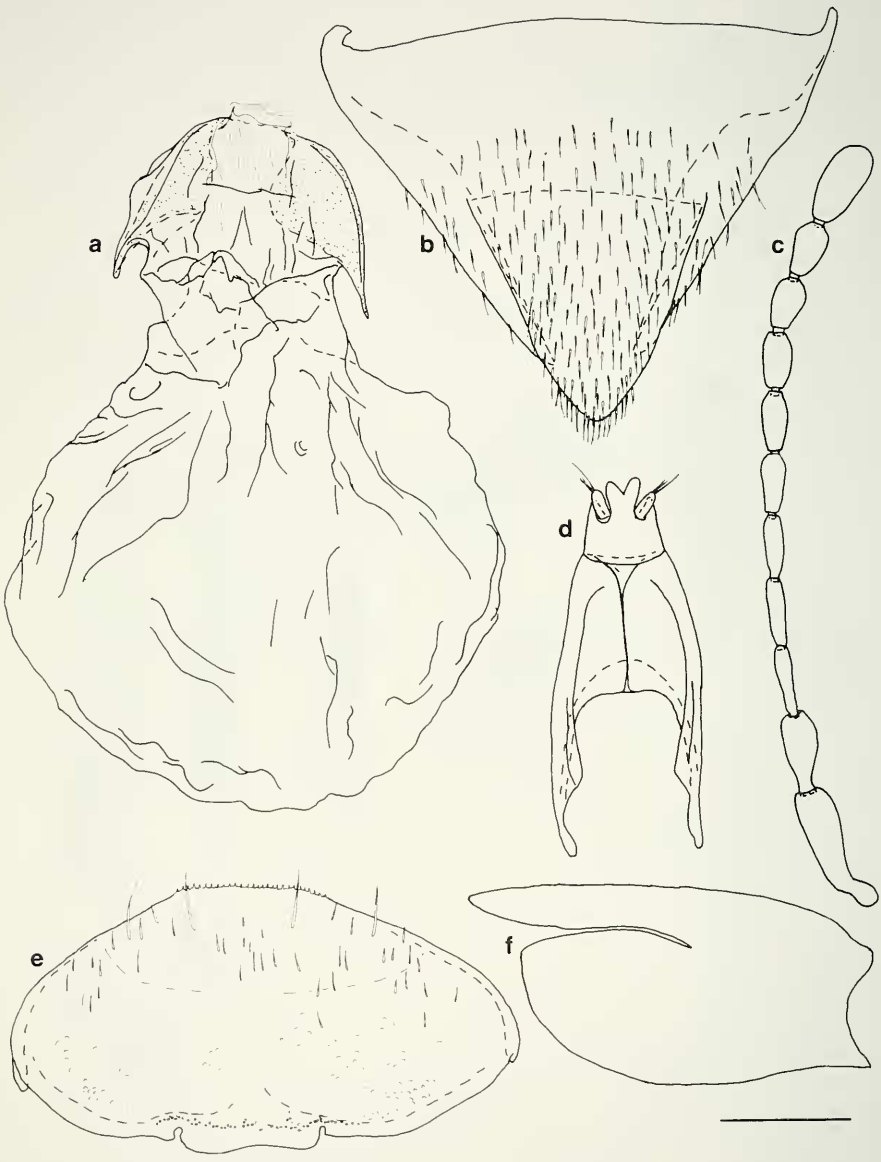

FIG. 28

Megarthrus magnicaudatus; a, d: female, genital segment, tergites (a) and sternites (d); b, f: female, abdominal tergite 8, dorsal and lateral; c: antenna; e: female, abdominal sternite 8. Scale bar = 0.2 mm.

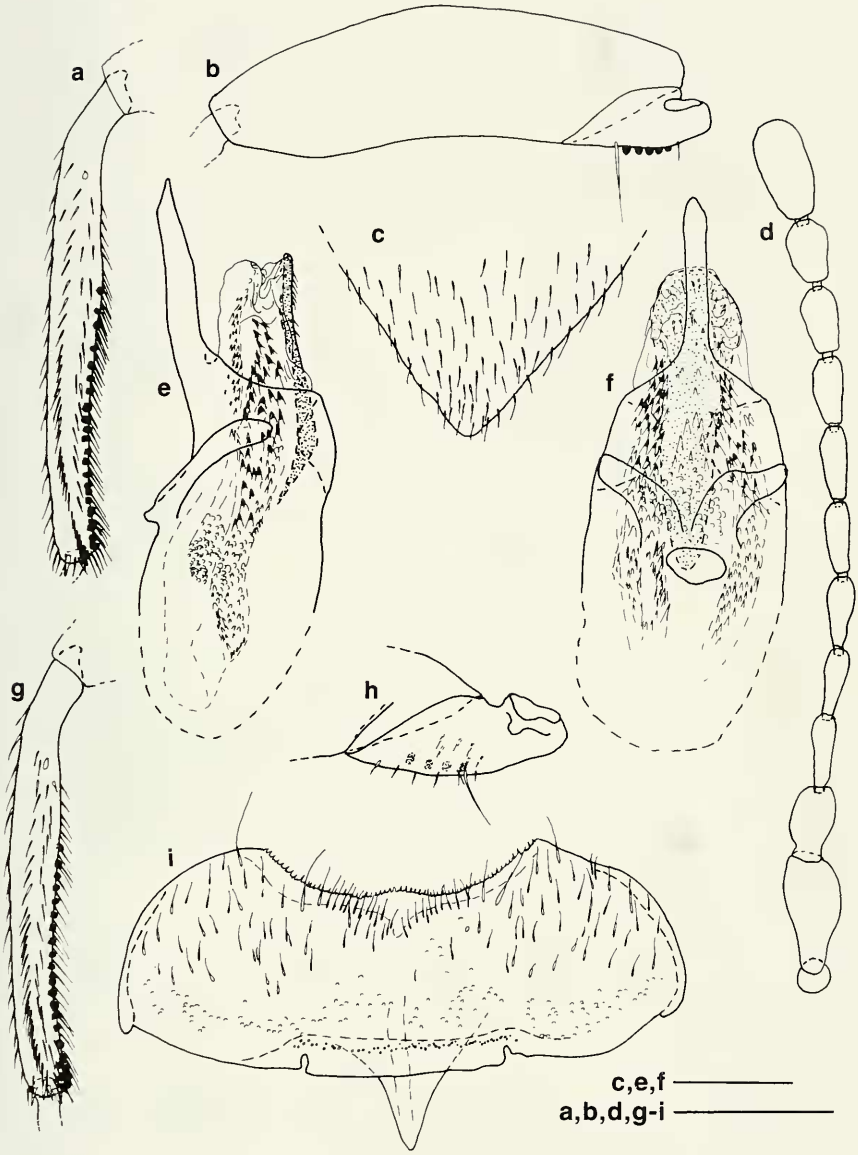

FIG. 29

Megarthrus mahnerti; a: male, metatibia; b: male, mesofemur and mesotrochanter; c: male, apex of abdominal tergite 8, dorsal; d; antenna; e, f: aedeagus, lateral and ventral; g: male, mesotibia; h: male, metatrochanter; i: male, abdominal sternite 8. Scale bars = 0.2 mm.

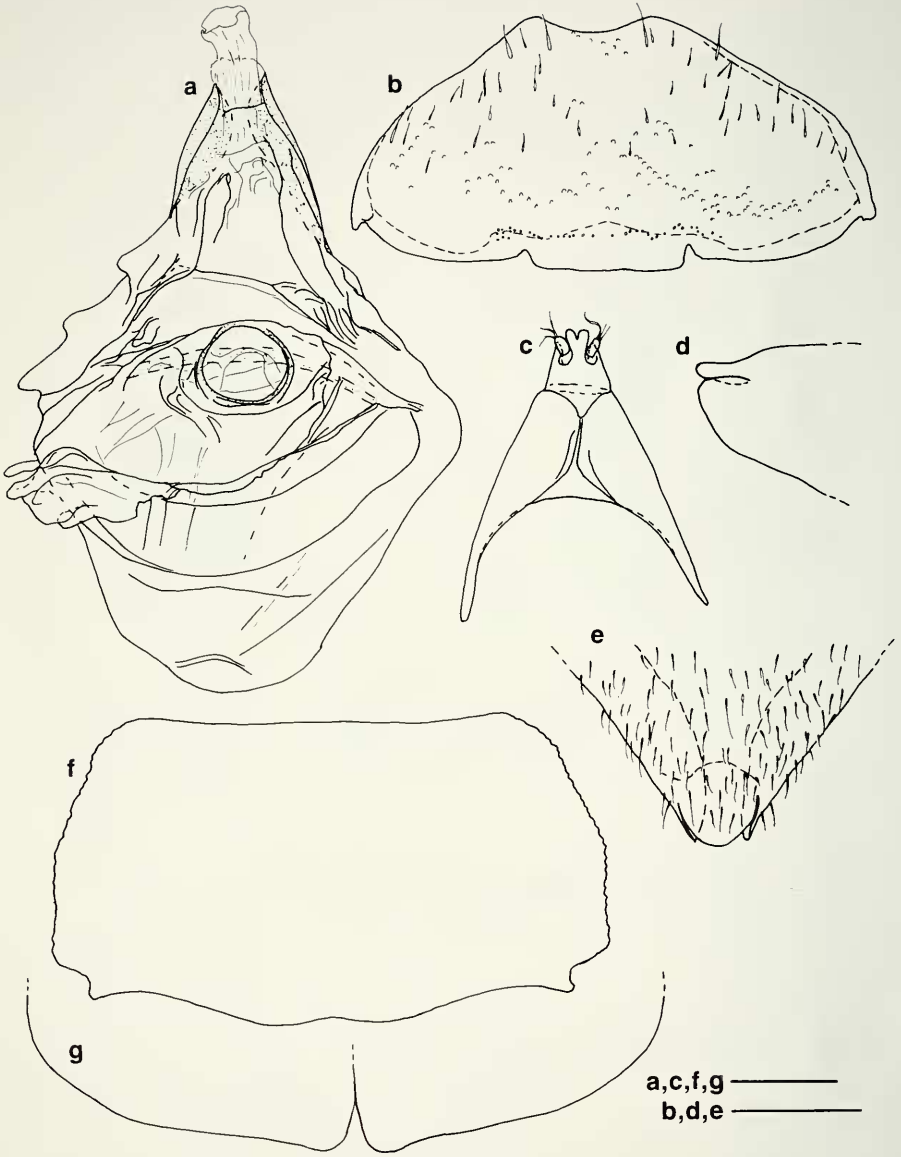

FIG. 30

Megarthrus mahnerti; a, c: female, genital segment, tergites (a) and sternites (c); b: female, abdominal sternite 8; d, e: female, apex of abdominal tergite 8, lateral and dorsal; f: pronotum; g: female, apical contour of elytra. Scale bars = 0.2 mm.

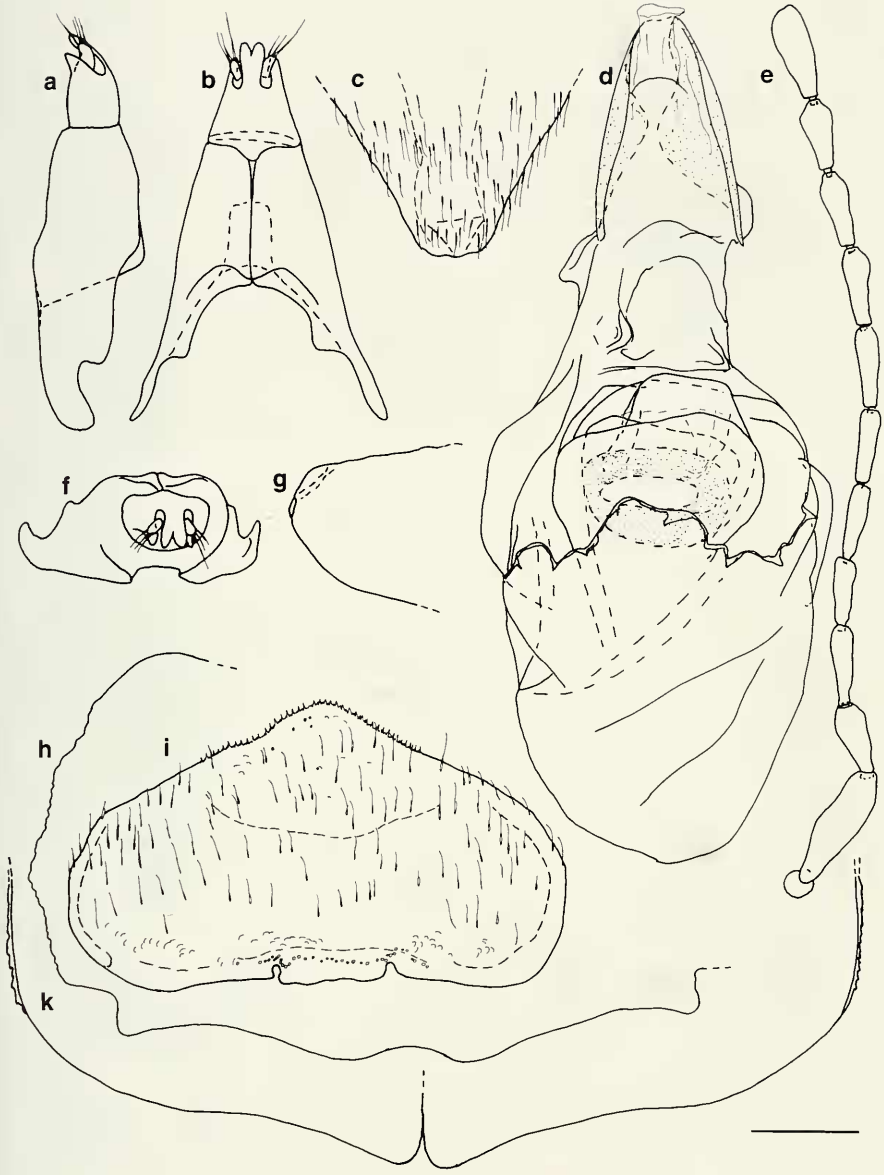

FIG. 31

Megarthrus major; a, b, d, f: female, genital segment, sternites, lateral (a), dorsal (b), posterior (f) and tergites (d); c, g: female, apex of abdominal tergite 8, dorsal and lateral; e: antenna; h: lateral and basal edges of pronotum; i: female, abdominal sternite 8; k: female, apical contour of elytra. Scale bar = 0.2 mm.

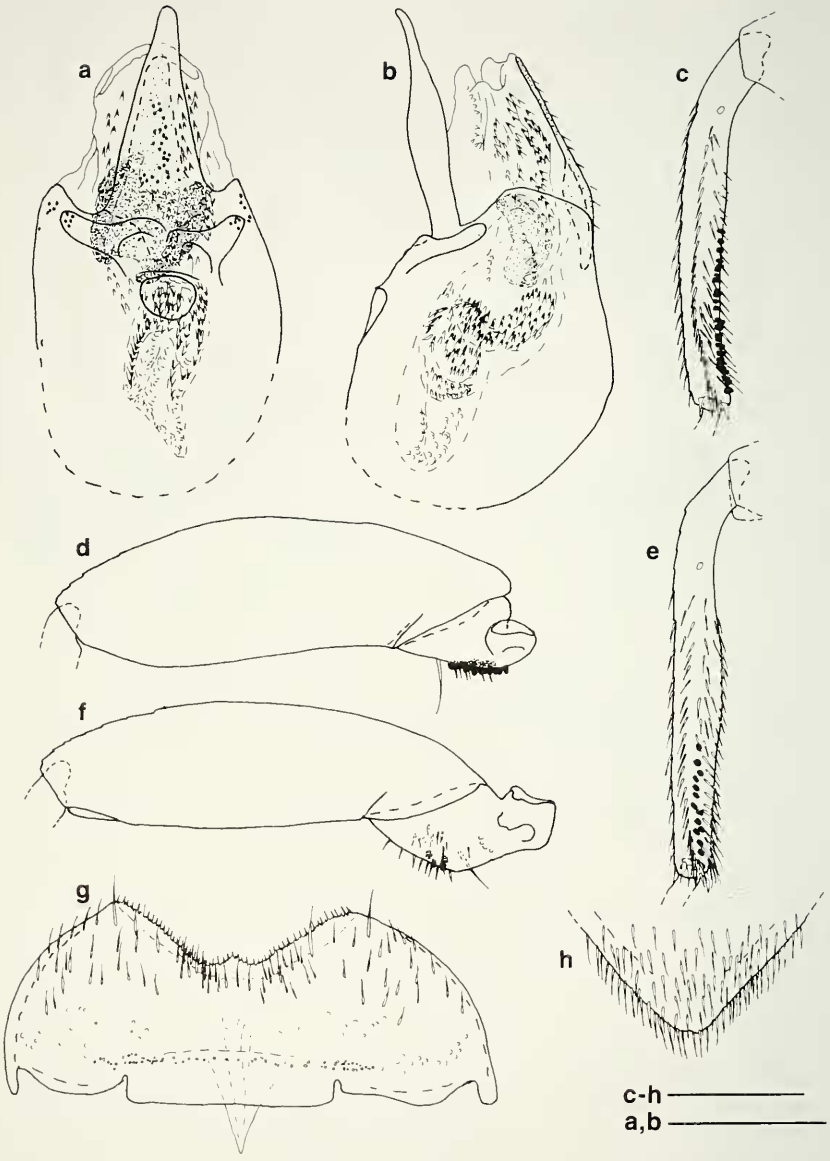

FIG. 32

Megarthrus maniwaata. male: a, b: aedeagus, ventral and lateral; c: mesotibia; d: mesofemur and mesotrochanter; e: metatibia; f: metafemur and metatrochanter; g: abdominal sternite 8; h: apex of abdominal tergite 8, dorsal view. Scale bars = 0.2 mm.

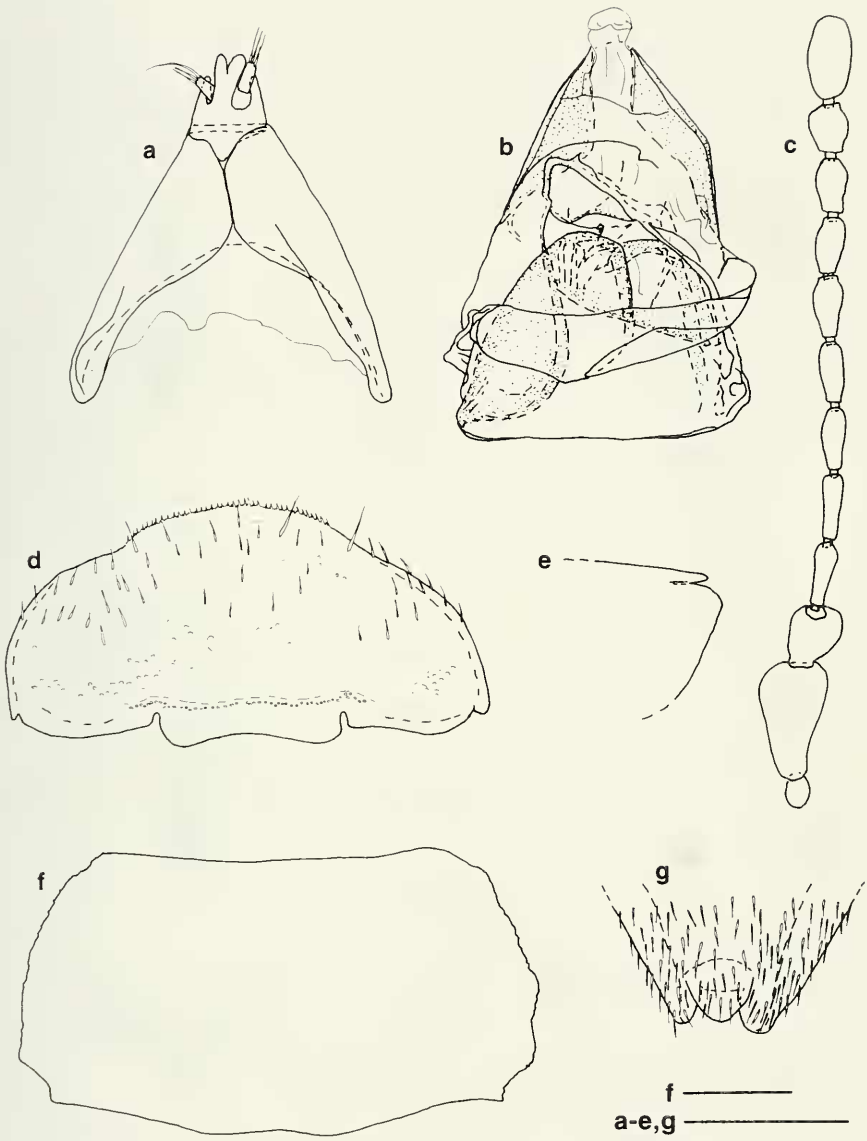

FIG. 33

Megarthrus maniwaata; a, b: female, genital segment, sternites (a) and tergites (b); c: antenna; d: female, abdominal sternite 8; e, g: female, apex of abdominal tergite 8, lateral and dorsal; f: pronotum. Scale bars = 0.2 mm.

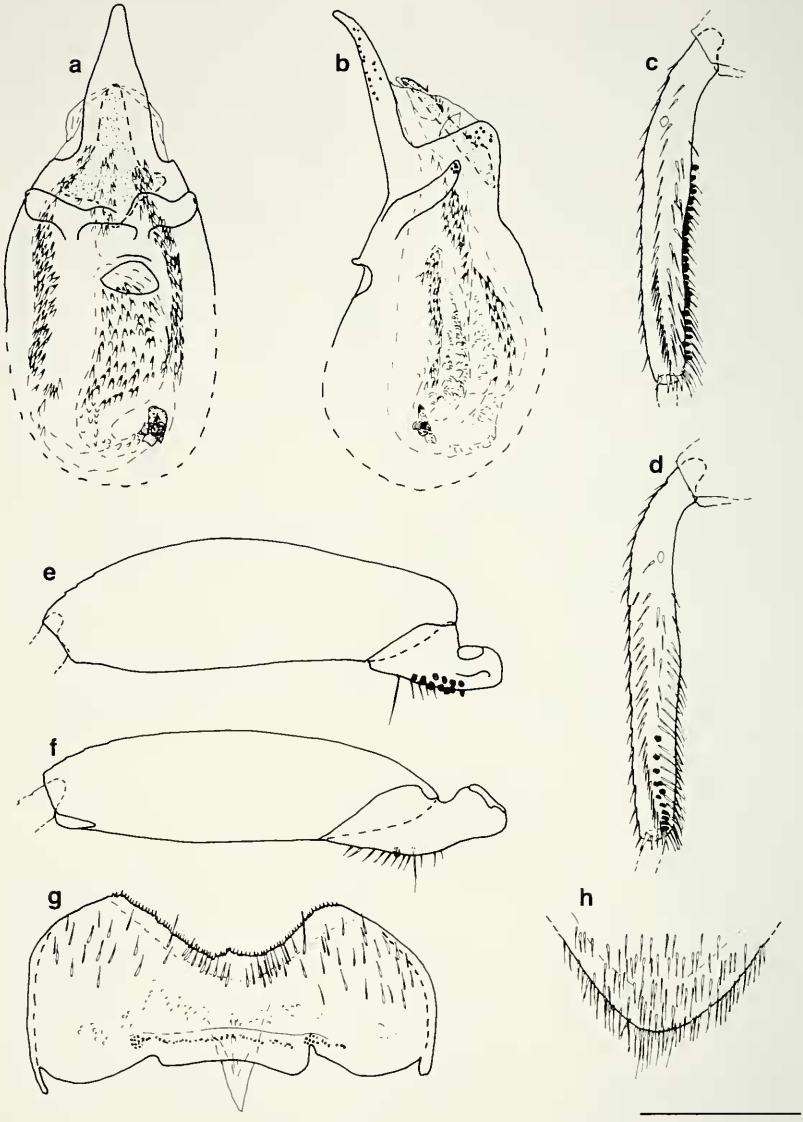

FIG. 34

Megarthrus merabet, male; a, b: aedeagus, ventral and lateral; c: mesotibia; d: metatibia; e: mesofemur and mesotrochanter; f: metafemur and metatrochanter; g: abdominal sternite 8; h: apex of abdominal tergite 8. Scale bar = 0.2 mm.

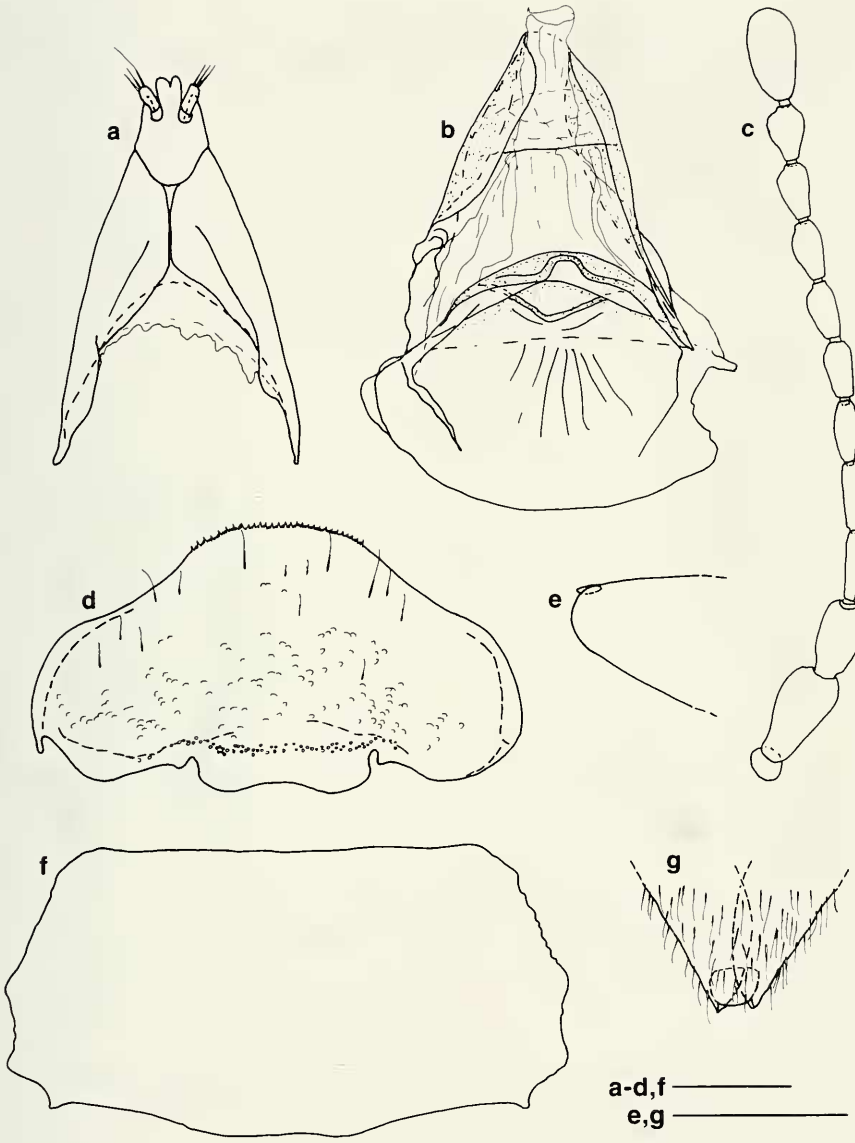

FIG. 35

Megarthrus merabet; a, b: female, genital segment, sternites (a) and tergites (b); c: antenna; d: female, abdominal sternite 8; e, g: female, apex of abdominal tergite 8, lateral and dorsal; f: pronotum. Scale bars = 0.2 mm.

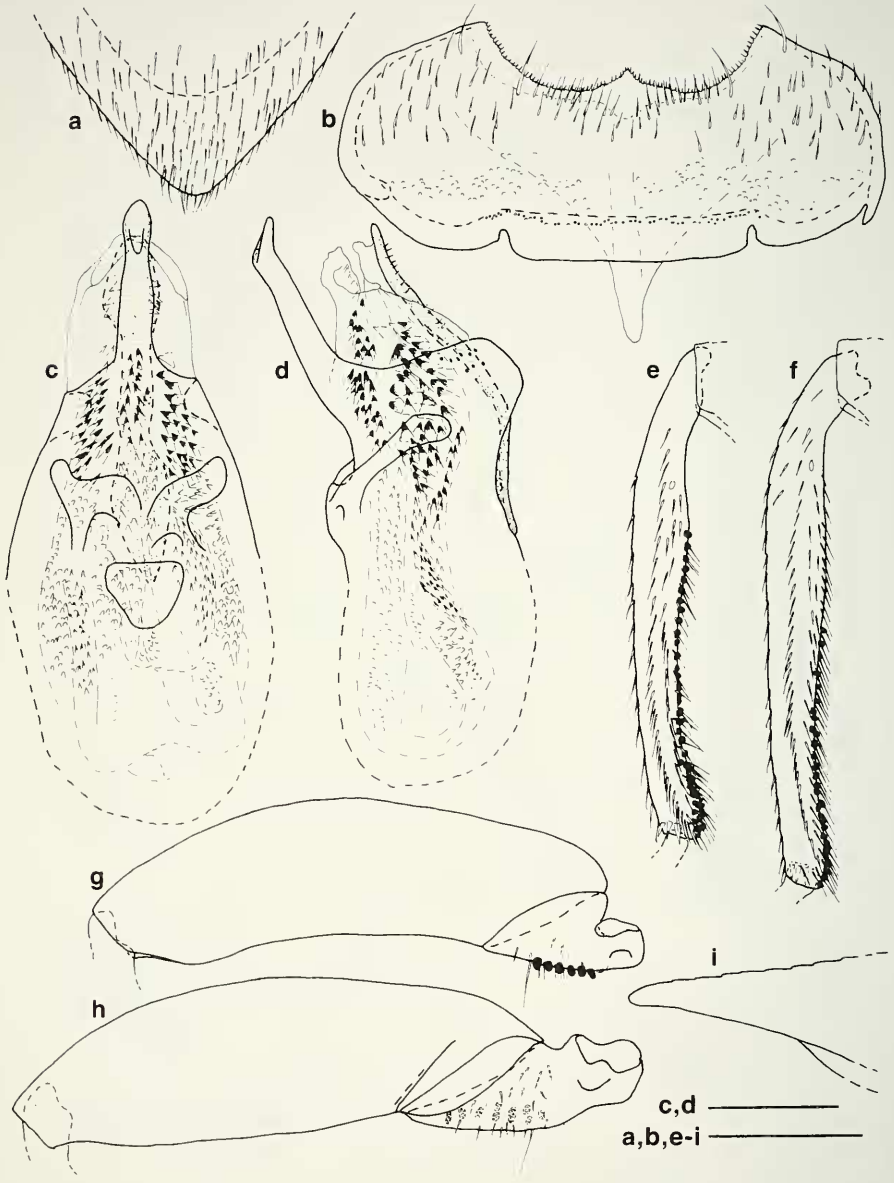

FIG. 36

Megarthrus monticola, male; a, i: apex of abdominal tergite 8, dorsal and lateral; b: abdominal sternite 8; c, d: aedeagus, ventral and lateral; e: mesotibia; f: metatibia; g: mesofemur and mesotrochanter; h: metafemur and metatrochanter. Scale bars = 0.2 mm.

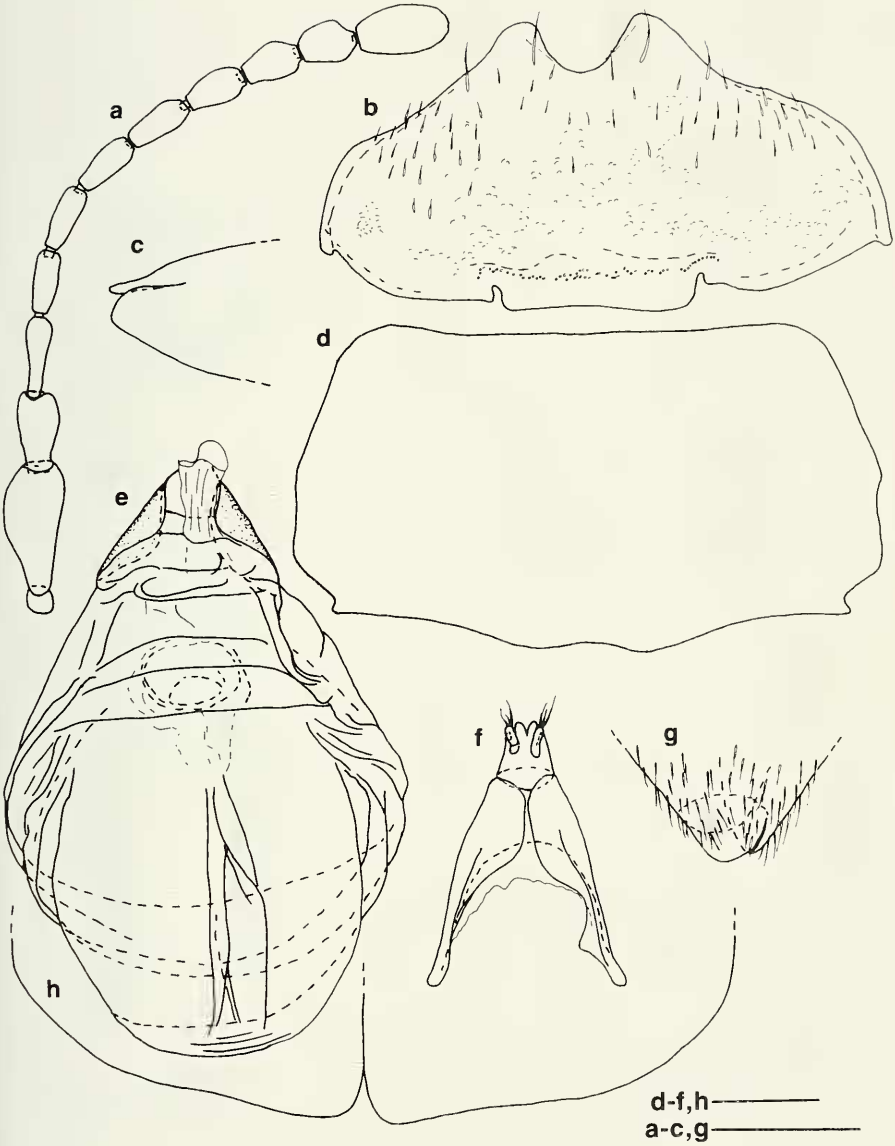

FIG. 37

Megarthrus monticola; a: antenna; b: female, abdominal sternite 8; c, g: female, apex of abdominal tergite 8, lateral and dorsal; d: pronotum; e: female, genital segment, tergites (e) and sternites (f); h: female, apical contour of elytra. Scale bars = 0.2 mm.

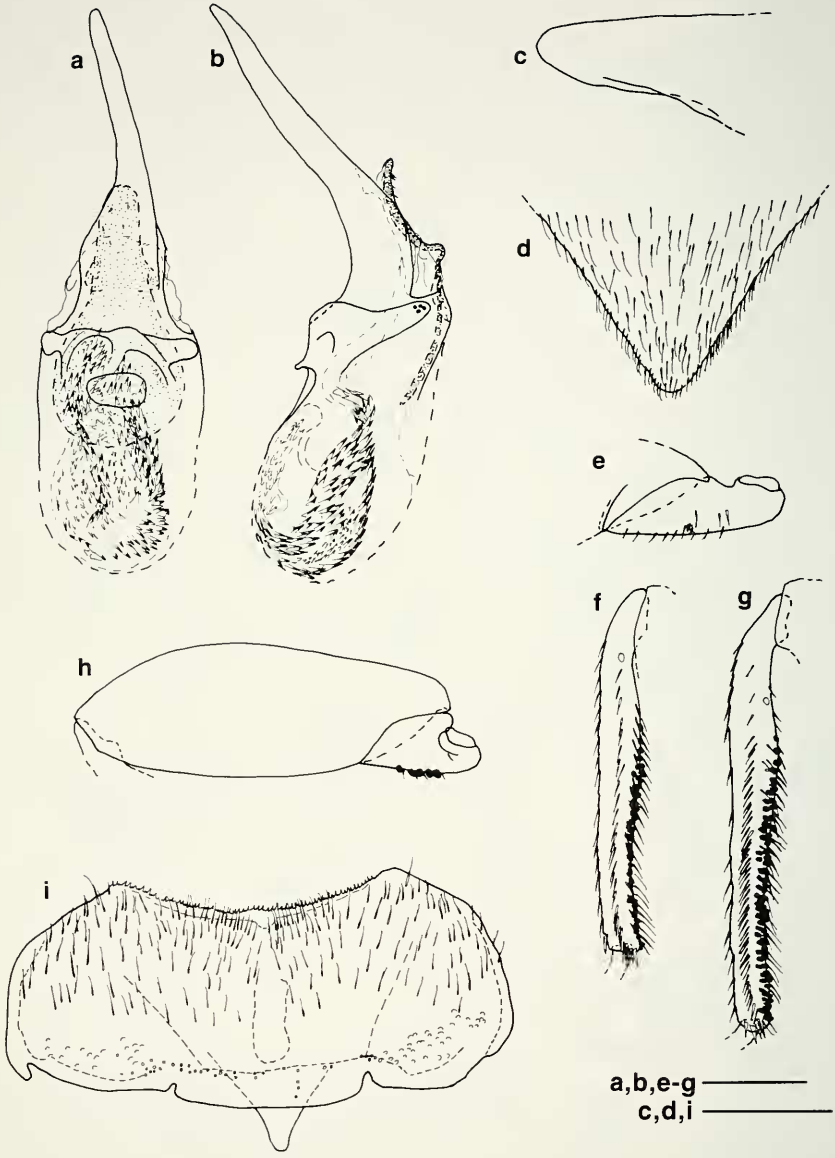

FIG. 38

Megarthrus mukankundiyeorum, male; a, b: aedeagus, ventral and lateral; c, d: apex of abdominal tergite 8, lateral and dorsal; e: metatrochanter; f: mesotibia; g: metatibia; h: mesofemur and mesotrochanter; i: abdominal sternite 8. Scale bars = 0.2 mm.

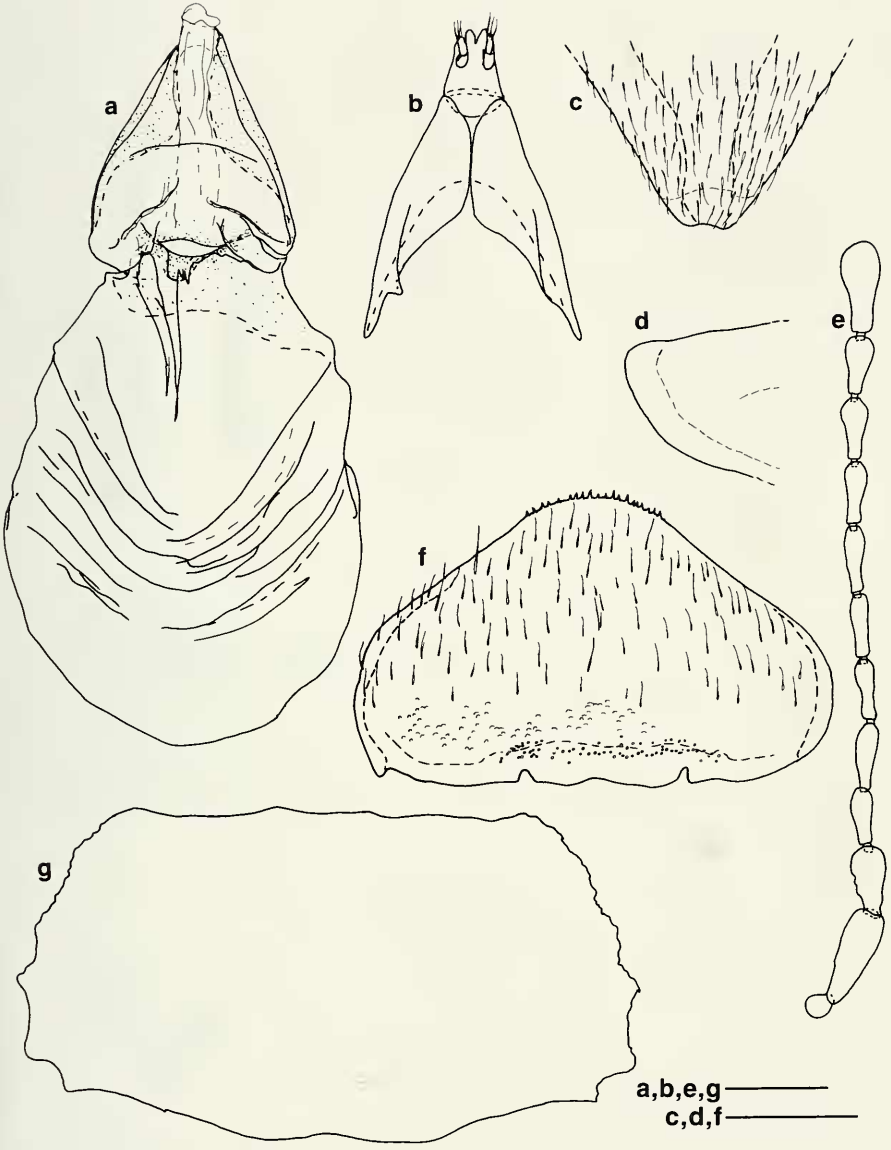

FIG. 39

Megarthrus mukankundiyeorum; a, b: female, genital segment, tergites (a) and sternites (b); c, d: female, apex of abdominal tergite 8, dorsal and lateral; e: antenna; f: female, abdominal sternite 8; g: pronotum. Scale bars = 0.2 mm.

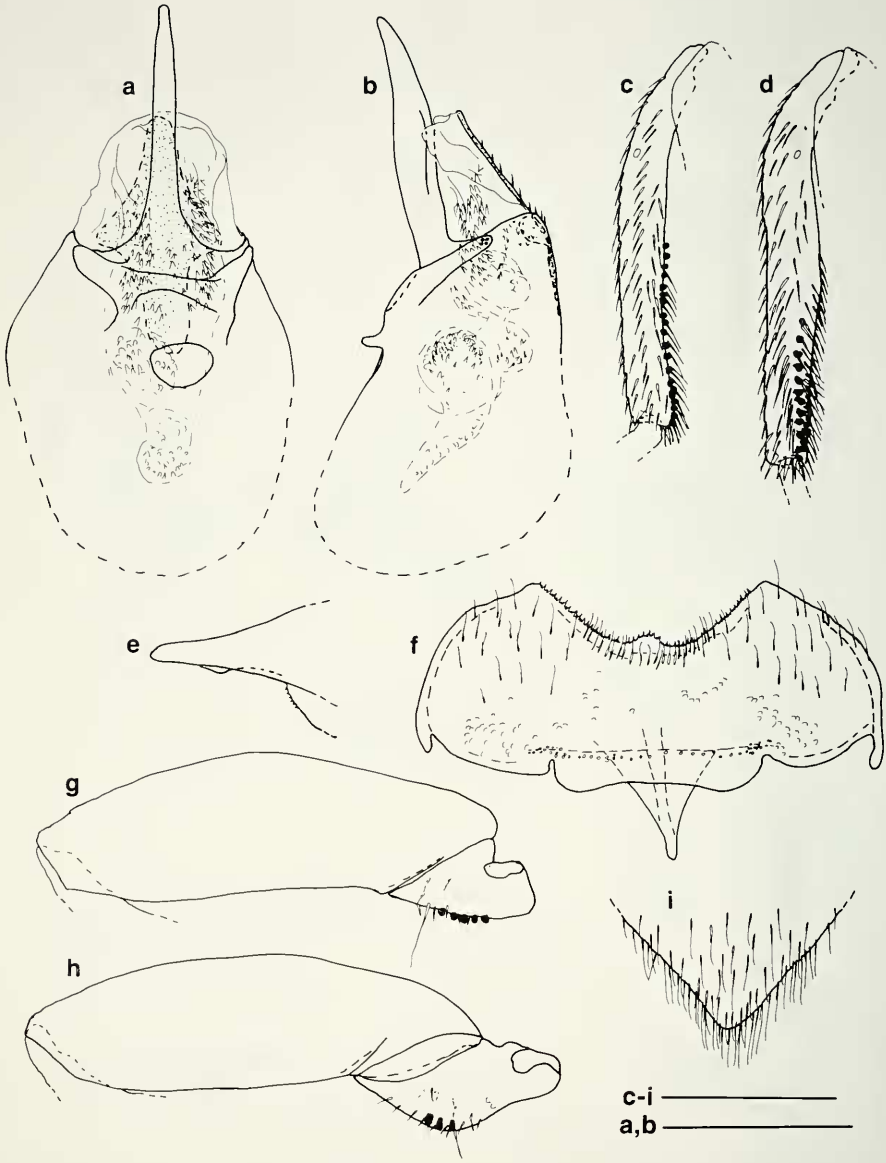

FIG. 40

Megarthrus mwami, male; a, b: aedeagus, ventral and lateral; c: mesotibia; d: metatibia; e, i: apex of abdominal tergite 8, lateral and dorsal; f: abdominal sternite 8; g: mesofemur and mesotrochanter; h: metafemur and metatrochanter. Scale bars = 0.2 mm.

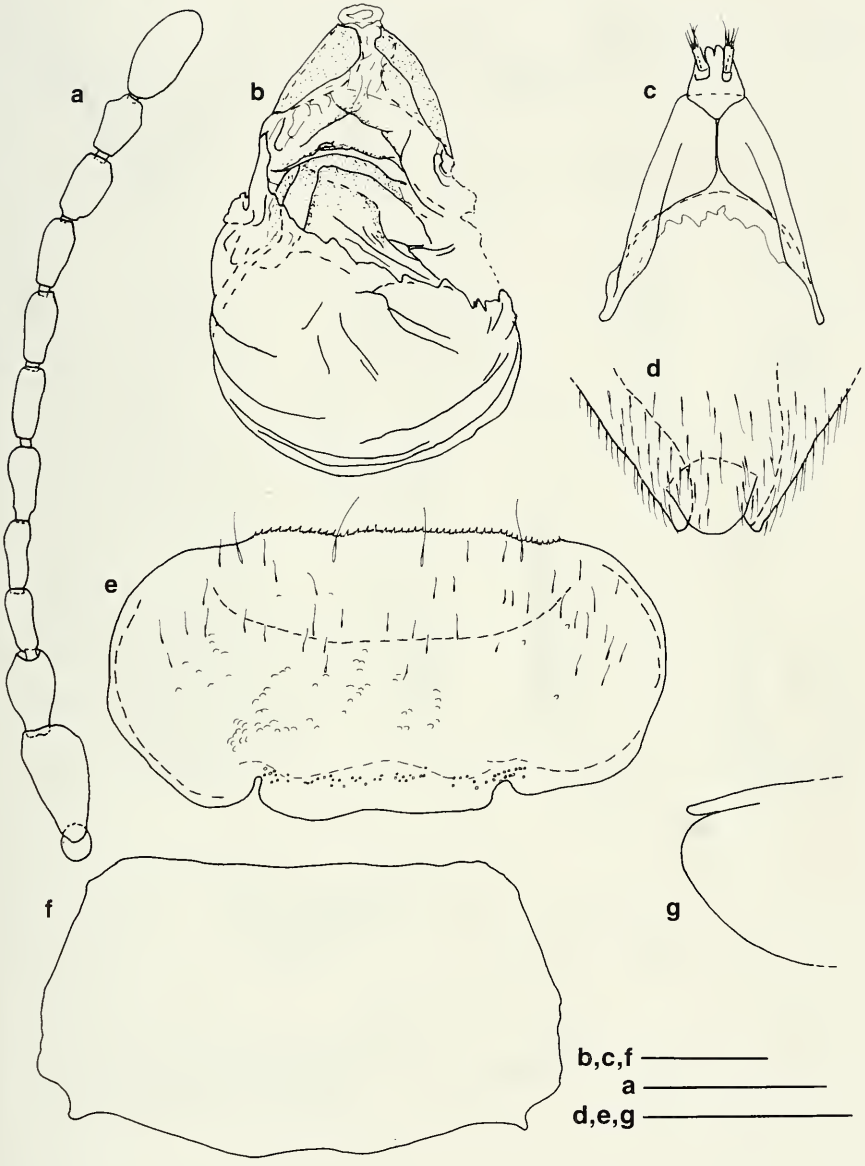

FIG. 41

Megarthrus mwami: a: antenna; b, c: female, genital segment, tergites (b) and sternites (c); d, g: female, apex of abdominal tergite 8, dorsal and lateral; e: female, abdominal sternite 8; f: pronotum. Scale bars = 0.2 mm.

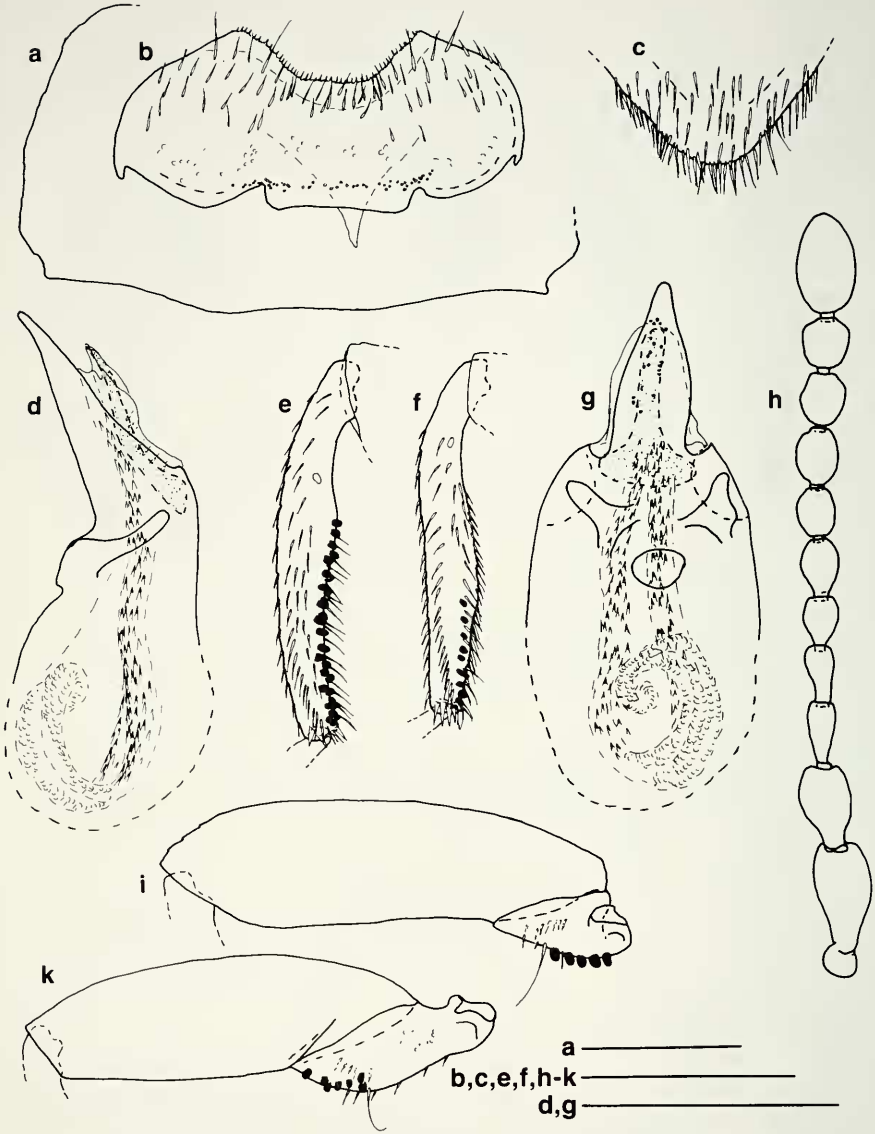

FIG. 42

Megarthrus nanus; a: lateral and basal edges of pronotum; b: male, abdominal sternite 8; c: male, apex of abdominal tergite 8, dorsal; d, g: aedeagus, lateral and ventral; e: male, mesotibia; f: male, metatibia; h: antenna; i: male, mesofemur and mesotrochanter; k: male, metafemur and metatrochanter. Scale bars = 0.2 mm.

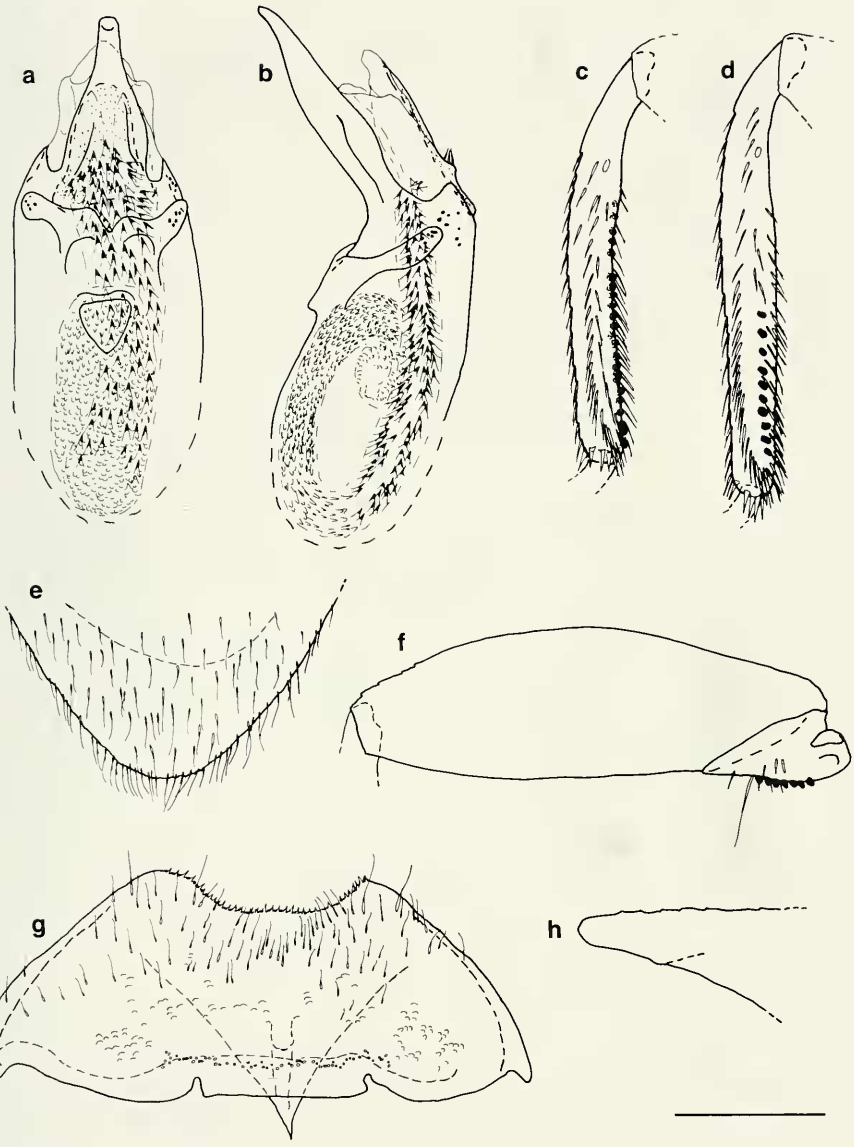

FIG. 43

Megarthrus negus, male; a, b: aedeagus, ventral and lateral; c: mesotibia; d: metatibia; e, h: apex of abdominal tergite 8, dorsal and lateral; f: mesofemur and mesotrochanter; g: abdominal sternite 8. Scale bar = 0.2 mm.

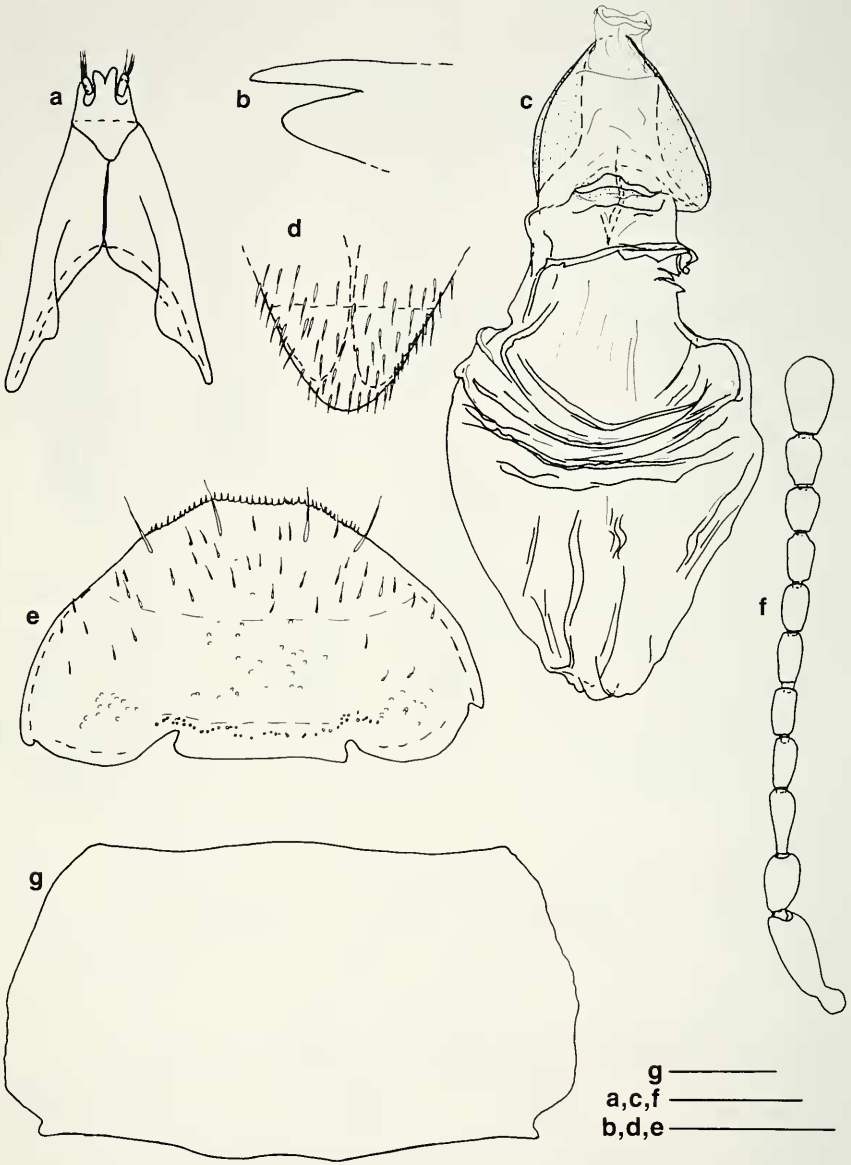

FIG. 44

Megarthrus negus; a, c: female, genital segment, sternites (a) and tergites (c); b, d: female, apex of abdominal tergite 8, lateral and dorsal; e: female, abdominal sternite 8; f: antenna; g: pronotum. Scale bars = 0.2 mm.

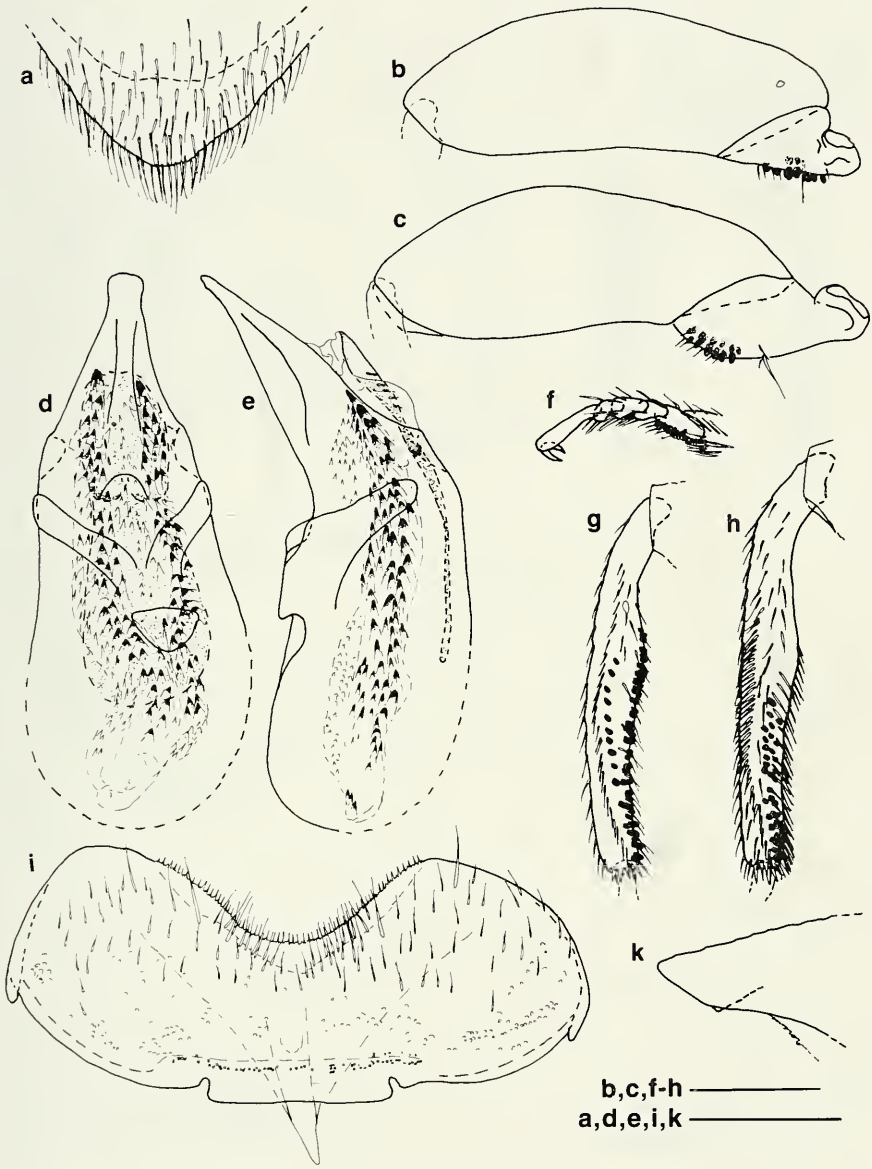

FIG. 45

Megarthrus niloticus, male; a, k: apex of abdominal tergite 8, dorsal and lateral; b: mesofemur and mesotrochanter; c: metafemur and metatrochanter; d, e: aedeagus, ventral and lateral; f: protarsi; g: mesotibia; h: metatibia; i: abdominal sternite 8. Scale bars = 0.2 mm.

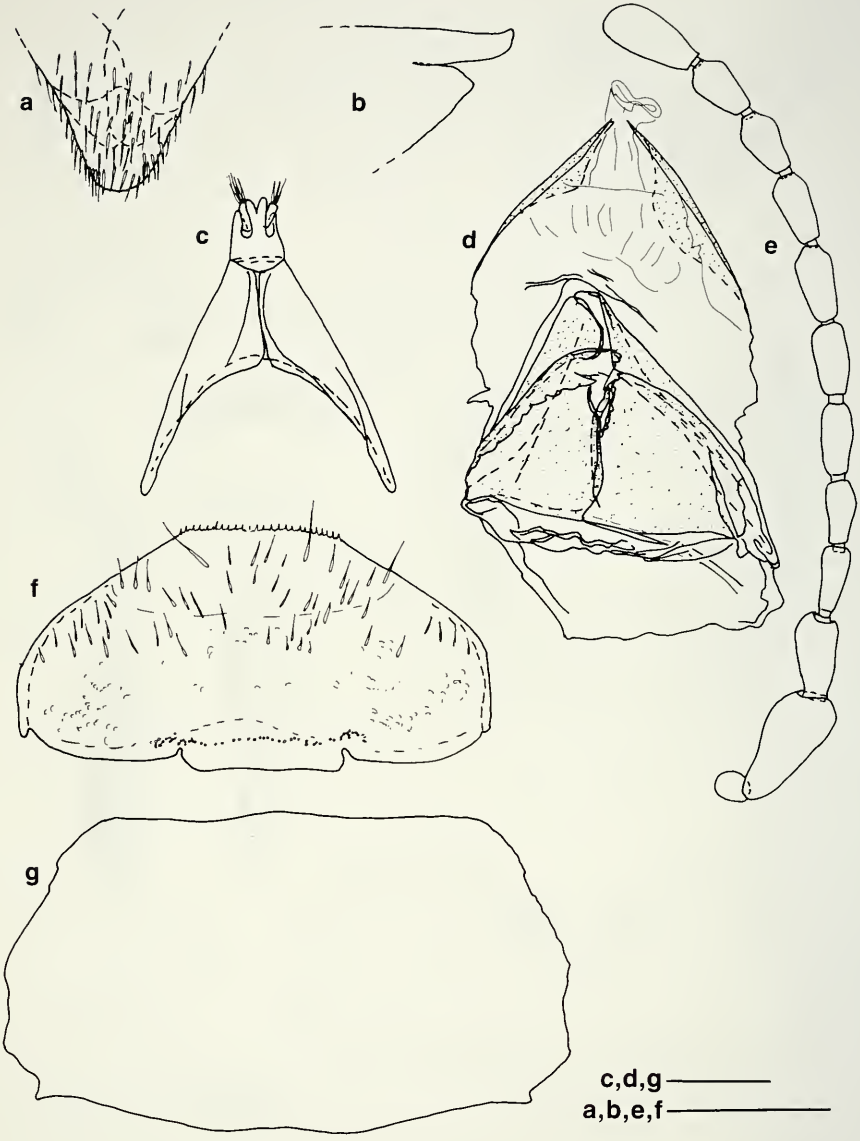

FIG. 46

Megarthrus niloticus; a, b: female, apex of abdominal tergite 8, dorsal and lateral; c, d: female, genital segment, sternites (c) and tergites (d); e: antenna; f: female, abdominal sternite 8; g: pronotum. Scale bars = 0.2 mm.

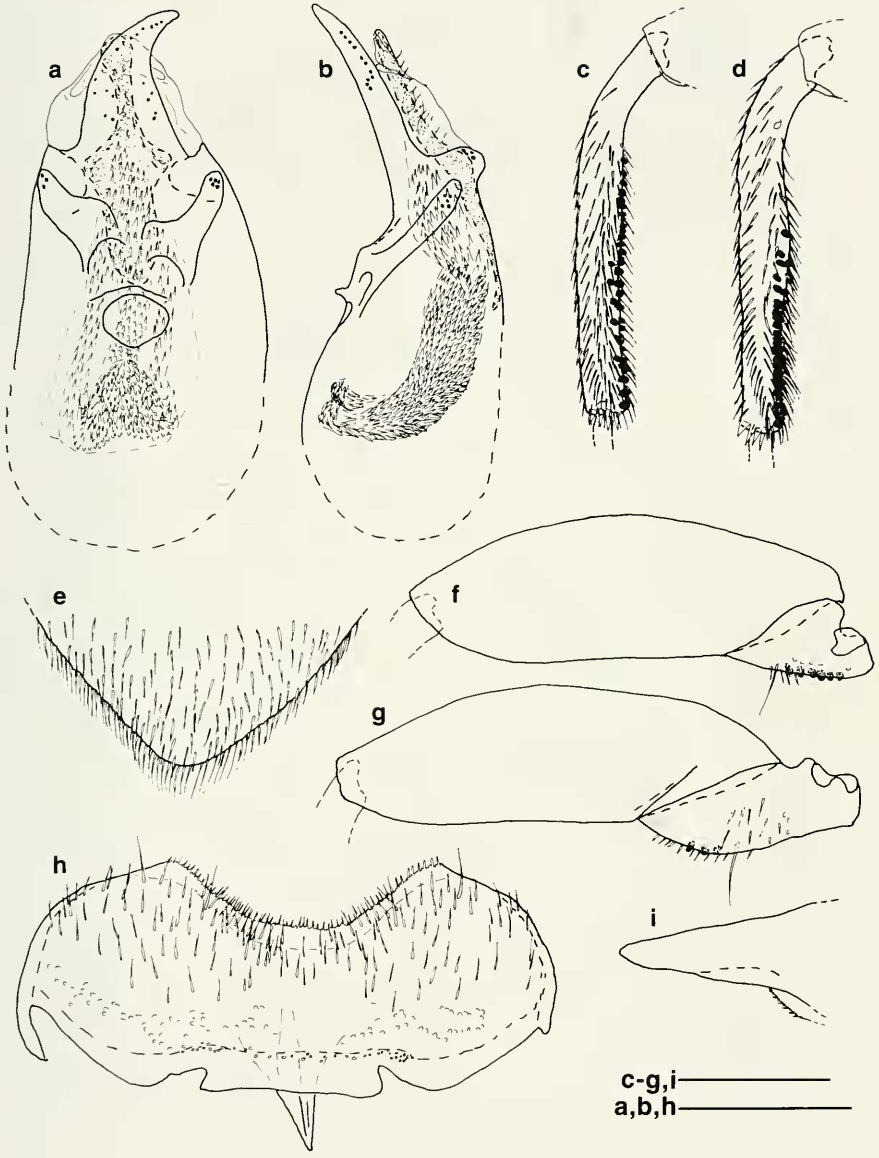

FIG. 47

Megarthrus ovalis, male; a, b: aedeagus, ventral and lateral; c: mesotibia; d: metatibia; e, i: apex of abdominal tergite 8, dorsal and lateral; f: mesofemur and mesotrochanter; g: metafemur and metatrochanter; h: abdominal sternite 8. Scale bars = 0.2 mm.

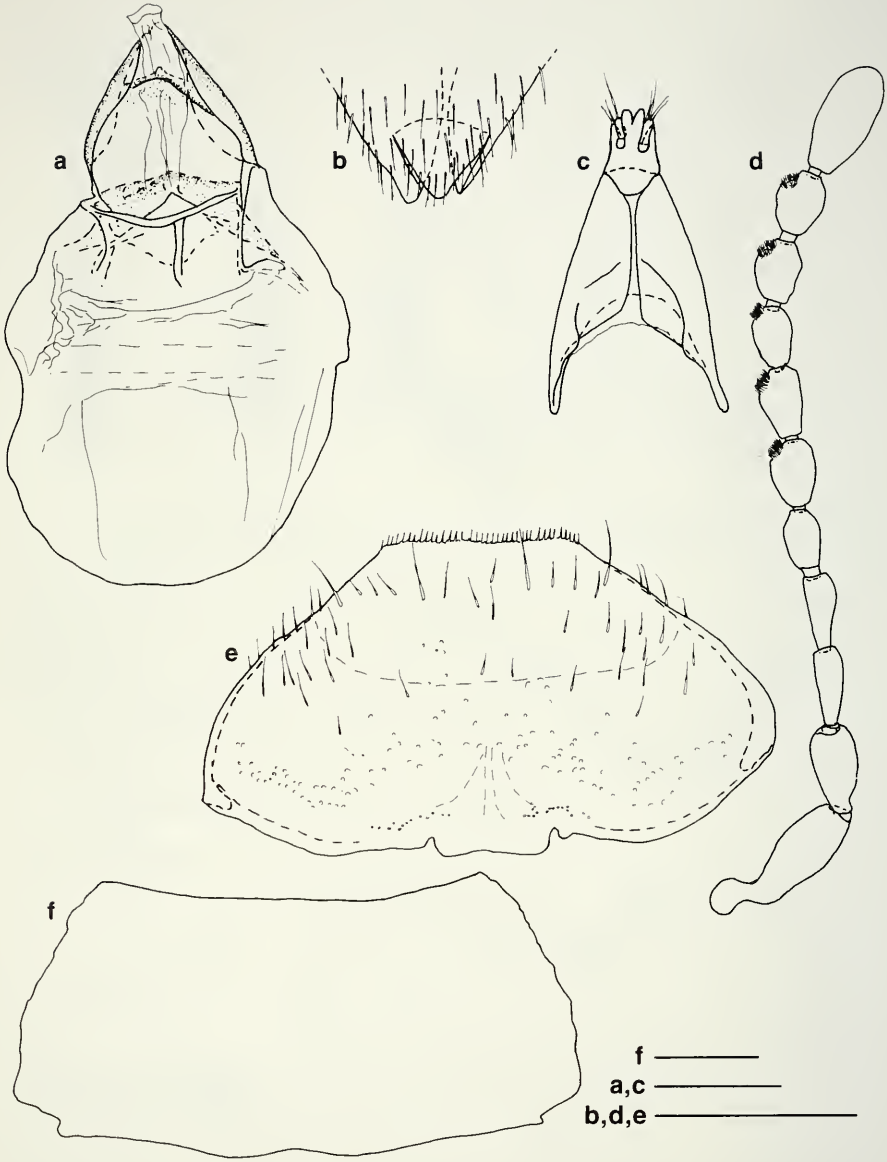

FIG. 48

Megarthrus ovalis; a, c: female, genital segment, tergites (a) and sternites (c); b: female, apex of abdominal tergite 8, dorsal; d: antenna; e: female, abdominal sternite 8; f: pronotum. Scale bars = 0.2 mm.

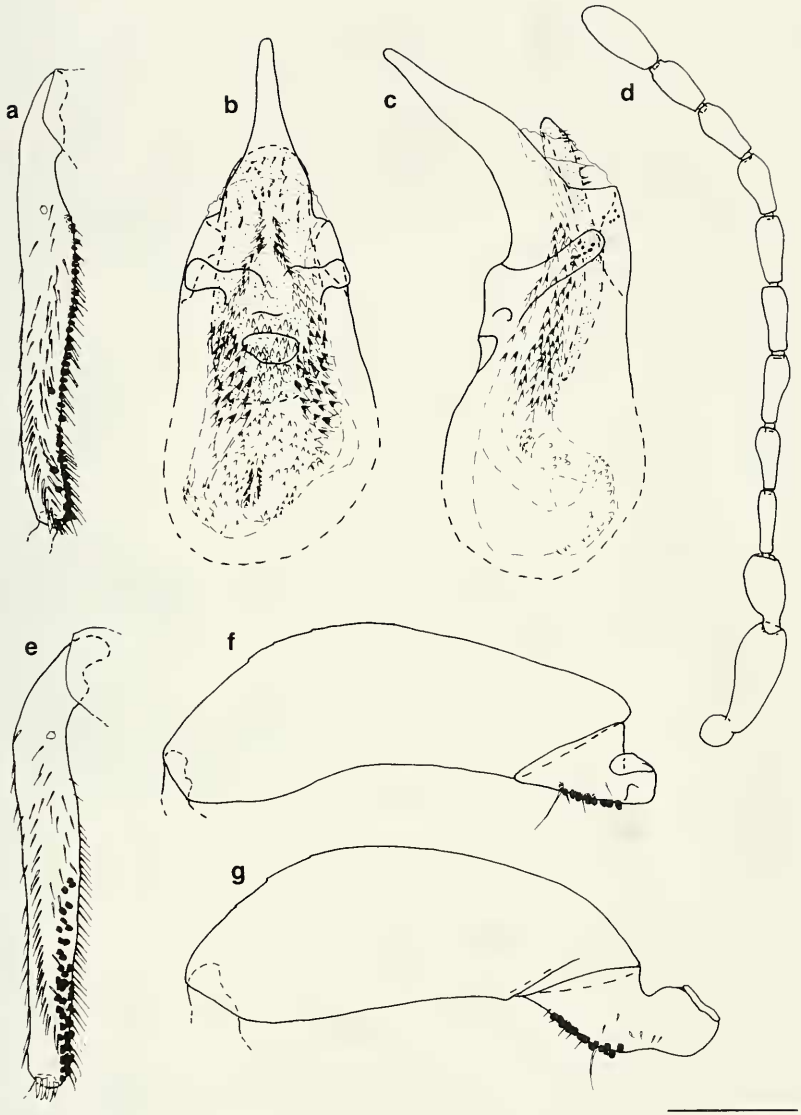

FIG. 49

Megarthrus panga; a; male, mesotibia; b, c: aedeagus, ventral and lateral; d: antenna; e: male, metatibia; f: mesofemur and mesotrochanter; g: metafemur and metatrochanter. Scale bar = 0.2 mm.

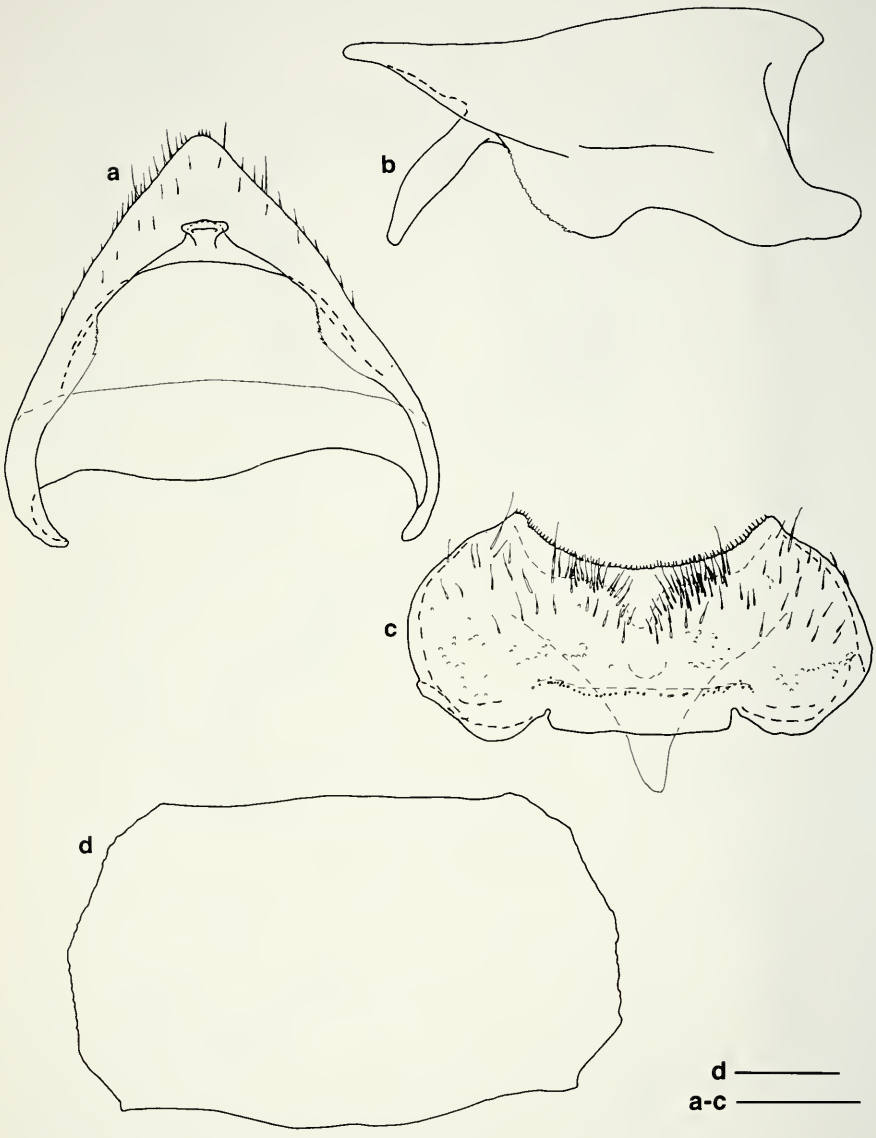

FIG. 50

Megarthrus panga; a, b: male, abdominal tergite 8, ventral and lateral; c: male, abdominal sternite 8; d: pronotum. Scale bars = 0.2 mm.

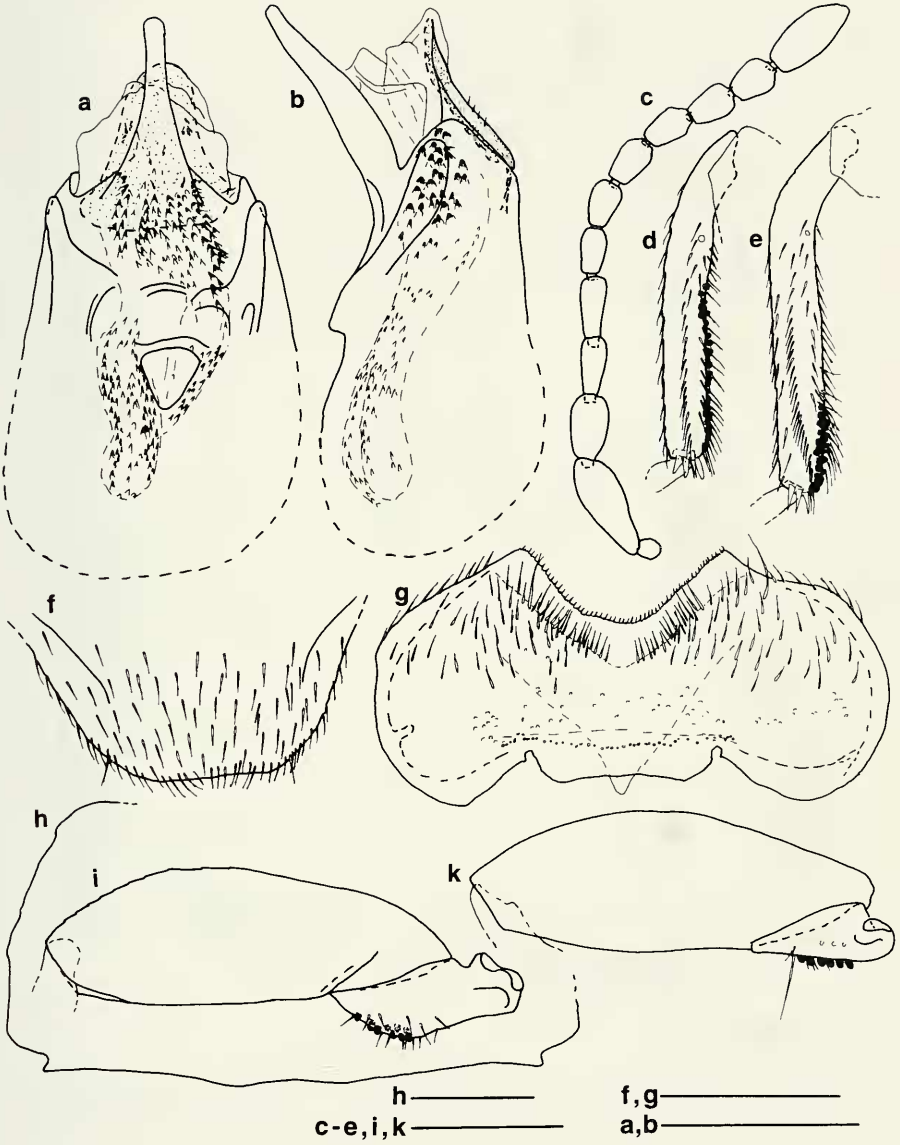

FIG. 51

Megarthrus ras; a-b: aedeagus, ventral and lateral; c: antenna; d: male, mesotibia; e: male, metatibia; f: male, apex of abdominal tergite 8, dorsal; g: male, abdominal sternite 8; h: lateral and basal edges of pronotum; i: male, metafemur and metatrochanter; k: male, mesofemur and mesotrochanter. Scale bars = 0.2 mm.

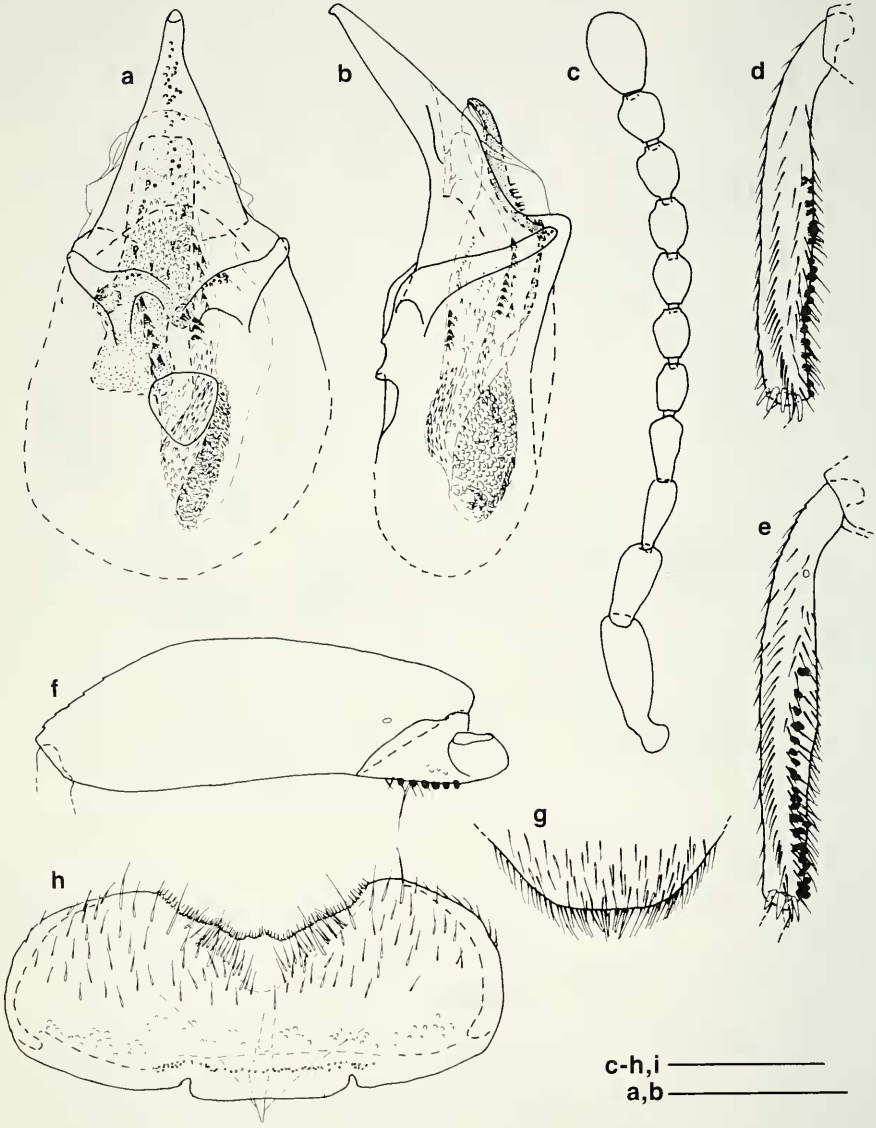

FIG. 52

Megarthrus rougemonti; a, b: aedeagus, ventral and lateral; c: antenna; d: male, mesotibia; e: male, metatibia; f: male, mesofemur and mesotrochanter; g: male, apex of abdominal tergite 8, dorsal; h: male, abdominal sternite 8. Scale bars = 0.2 mm.

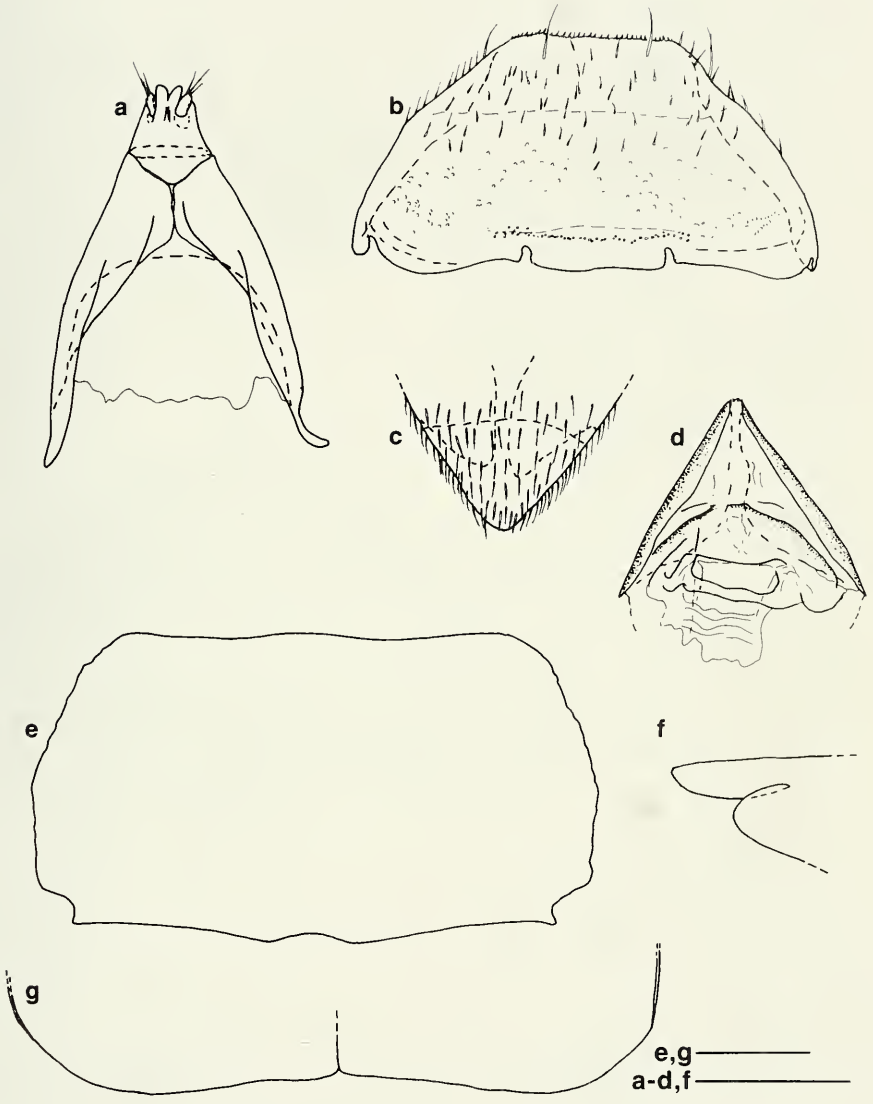

FIG. 53

Megarthrus rougemonti; a, d: female, genital segment, sternites (a) and tergites (d), basal portion broken; b: female, abdominal sternite 8; c, f: female, apex of abdominal tergite 8, dorsal and lateral; e: pronotum; g: male, apical contour of elytra. Scale bars = 0.2 mm.

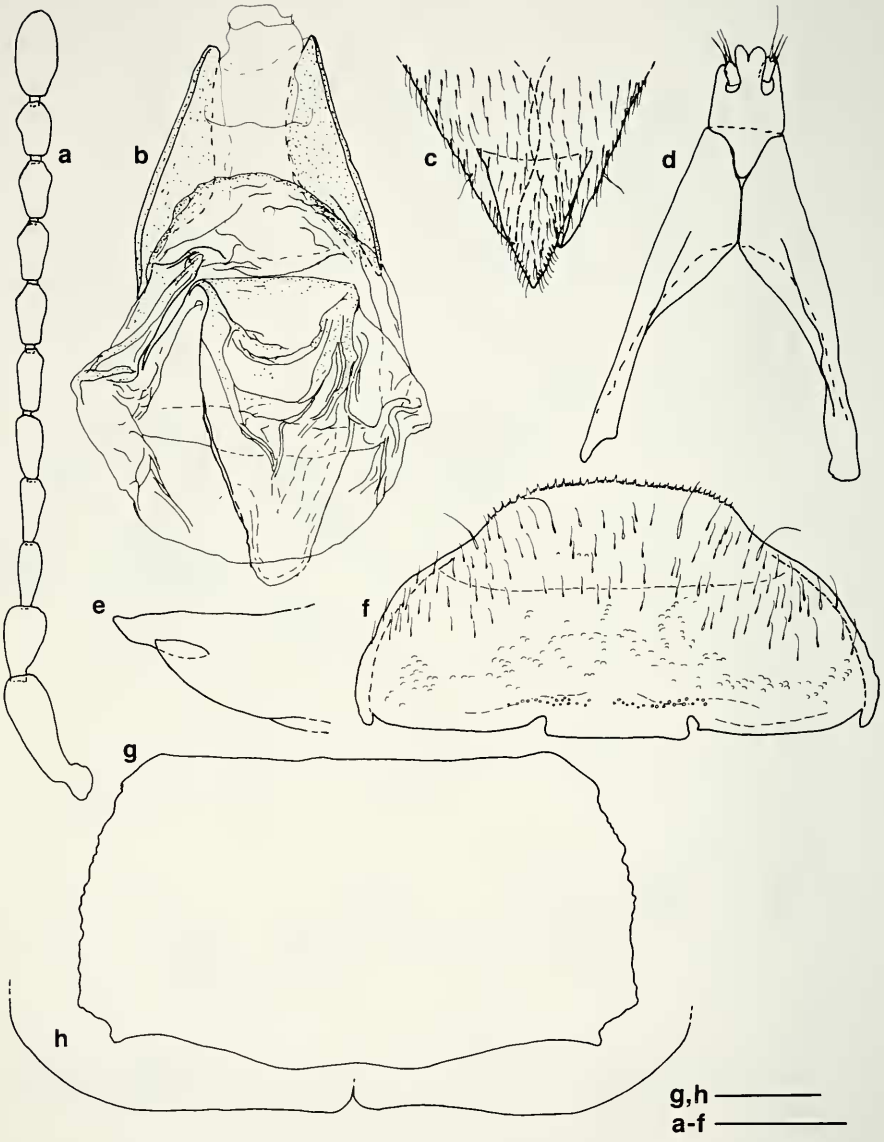

FIG. 54

Megarthrus scotti; a: antenna; b, d: female, genital segment, tergites (b) and sternites (d); c, e: female, apex of abdominal tergite 8, dorsal and lateral; f: female, abdominal sternite 8; g: pronotum; h: female, apical contour of elytra. Scale bars = 0.2 mm.

FIG. 55

Megarthrus selenitus; a: antenna; b, d: female, genital segment, sternites (b) and tergites (d); c, f: female, apex of abdominal tergite 8, dorsal and lateral; e: female, abdominal sternite 8; g: pronotum. Scale bars = 0.2 mm.

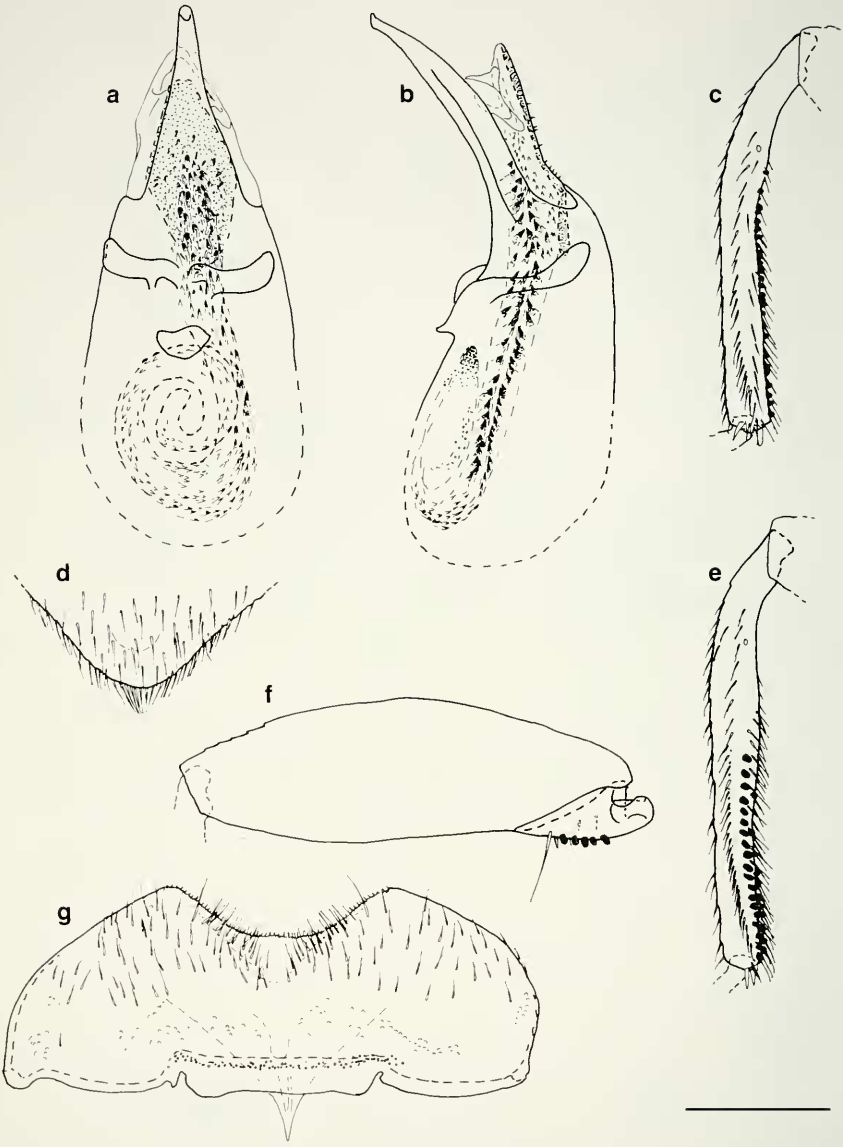

FIG. 56

Megarthrus simienensis, male; a, b: aedeagus, ventral and lateral; c: mesotibia; d: apex of abdominal tergite 8, dorsal; e: metatibia; f: mesofemur and mesotrochanter; g: abdominal sternite 8. Scale bar = 0.2 mm.

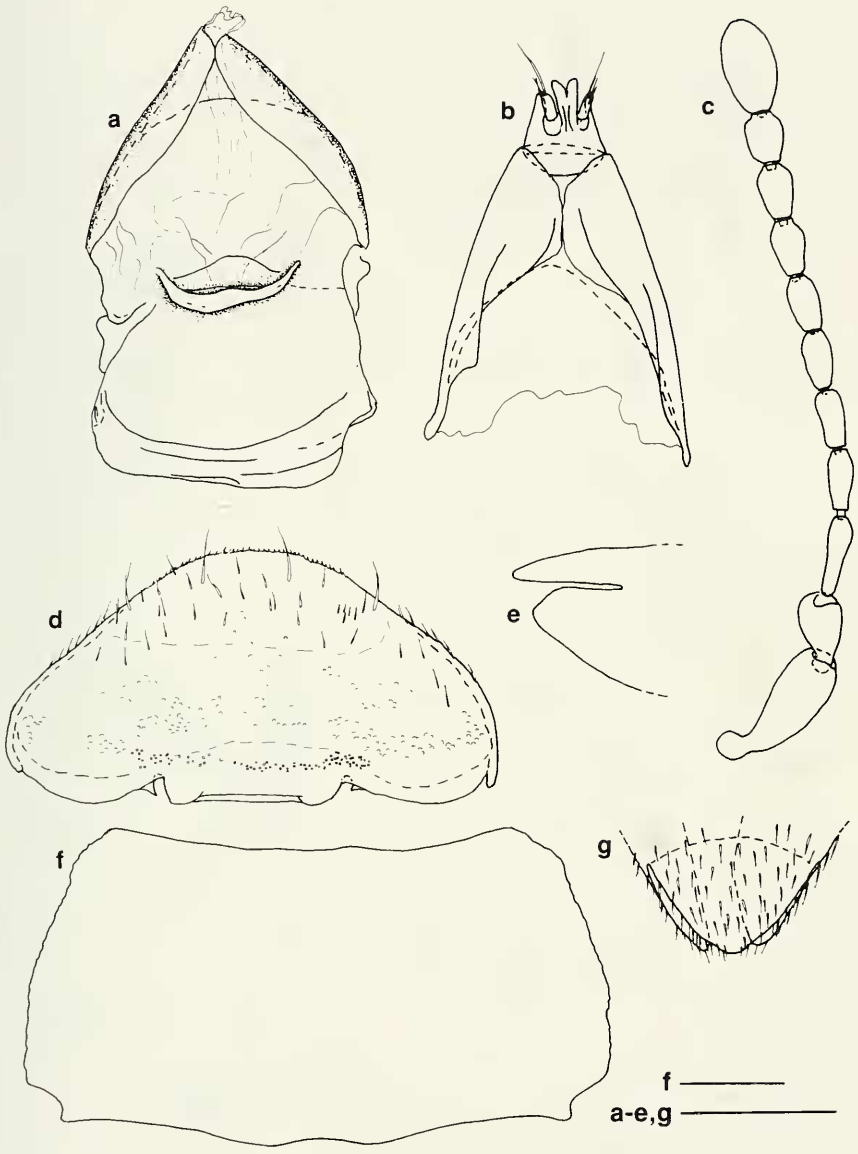

FIG. 57

Megarthrus simienensis; a, b: female, genital segment, tergites (a) and sternites (b); c: antenna; d: female, abdominal sternite 8; e, g: female, apex of abdominal tergite 8, lateral and dorsal; f: pronotum. Scale bars = 0.2 mm.

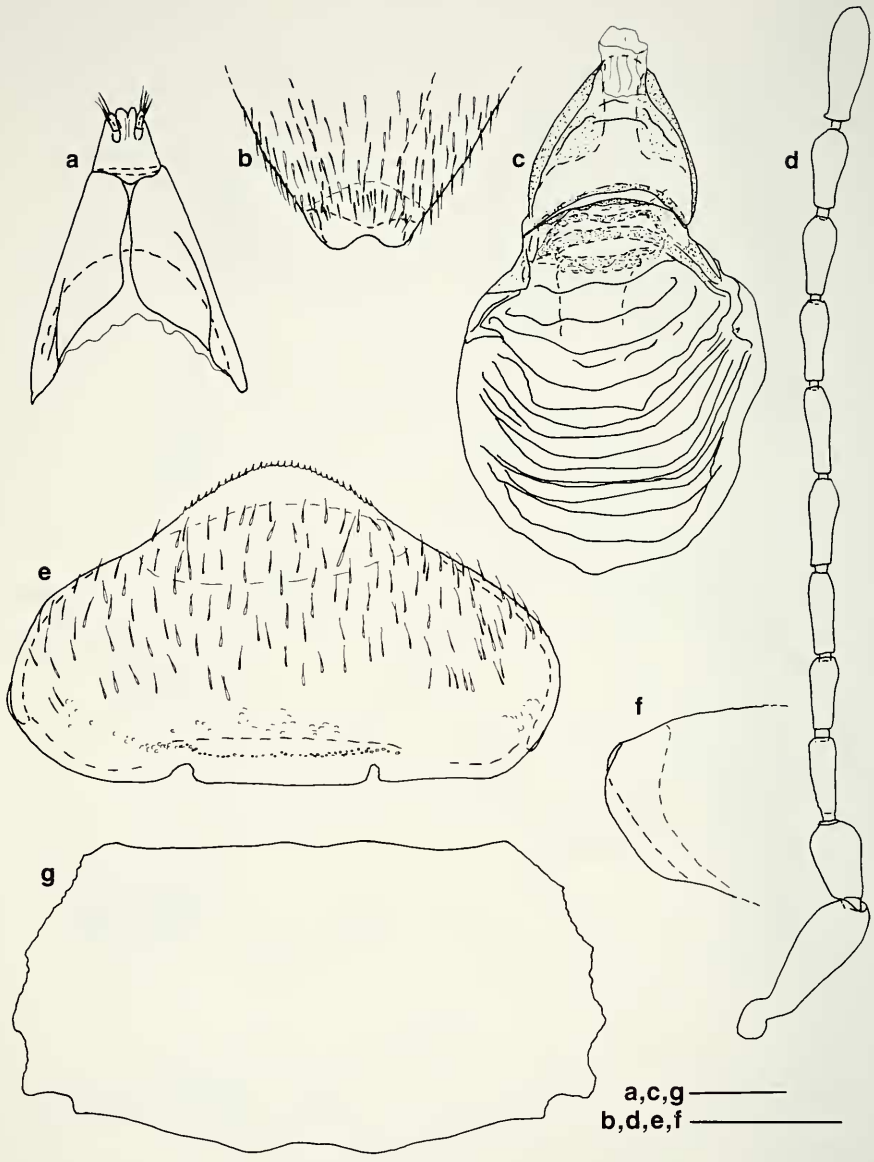

FIG. 58

Megarthrus spinosus; a, c: female, genital segment, sternites (a) and tergites (c); b, f: female, apex of abdominal tergite 8, dorsal and lateral; d: antenna; e: female, abdominal sternite 8; g: pronotum. Scale bars = 0.2 mm.

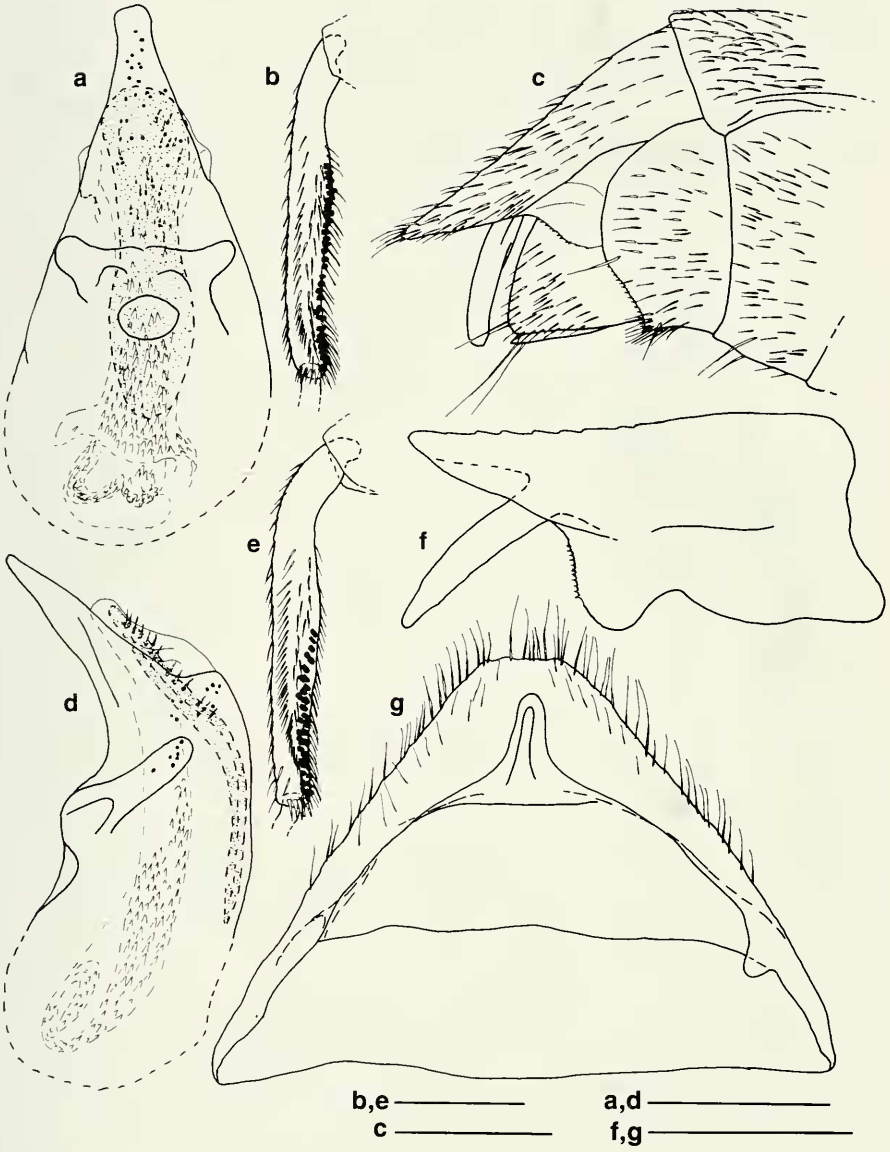

FIG. 59

Megarthrus stylifer, male; a, d: aedeagus, ventral and lateral; b: mesotibia; c: abdominal segments 7-10, lateral; e: metatibia; f, g: abdominal tergite 8, lateral and ventral. Scale bars = 0.2 mm.

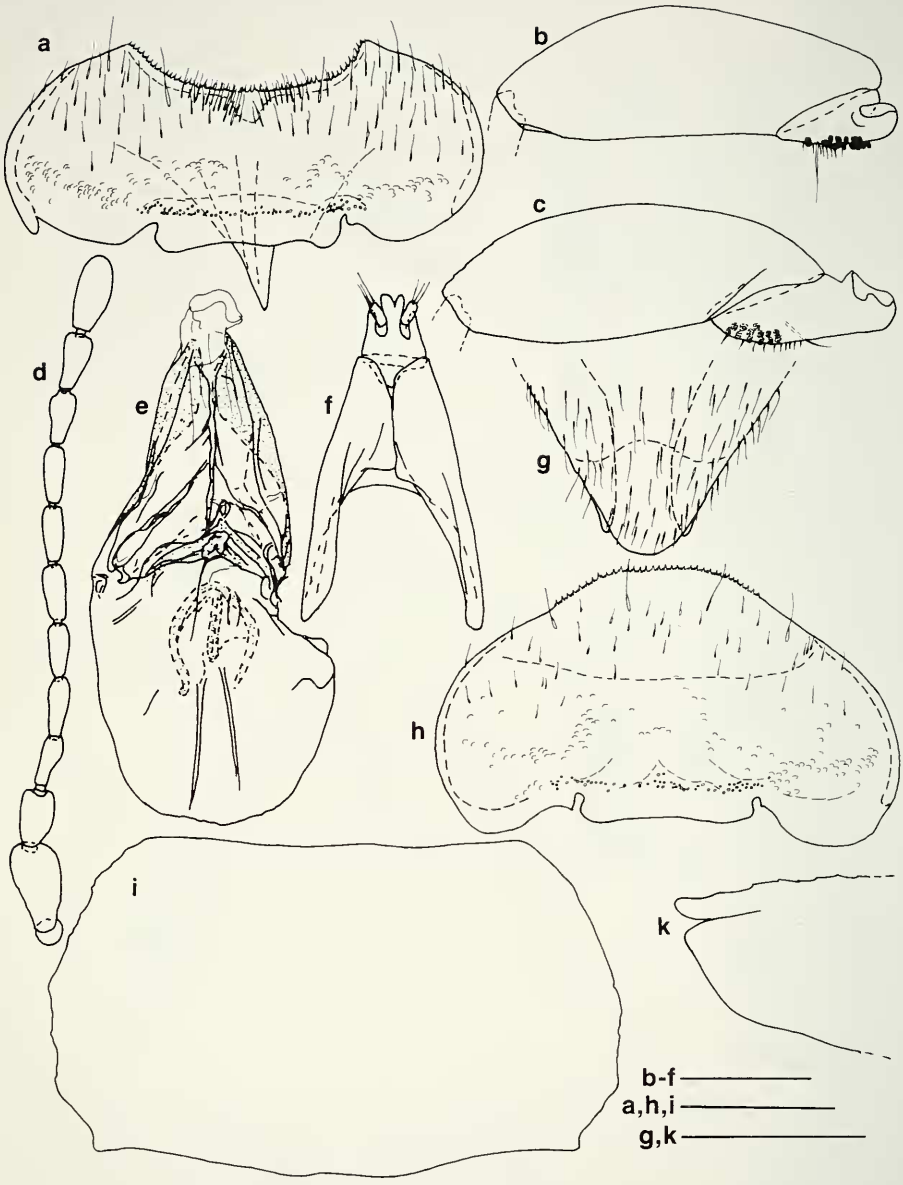

FIG. 60

Megarthrus stylifer; a, h: abdominal sternite 8, male (a) and female (h); b: male, mesofemur and mesotrochanter; c; male, metafemur and metatrochanter; d, antenna; e, f, female, genital segment, tergites (e) and sternites (f); g, k: female, apex of abdominal tergite 8, dorsal and lateral; i: pronotum. Scale bars = 0.2 mm.

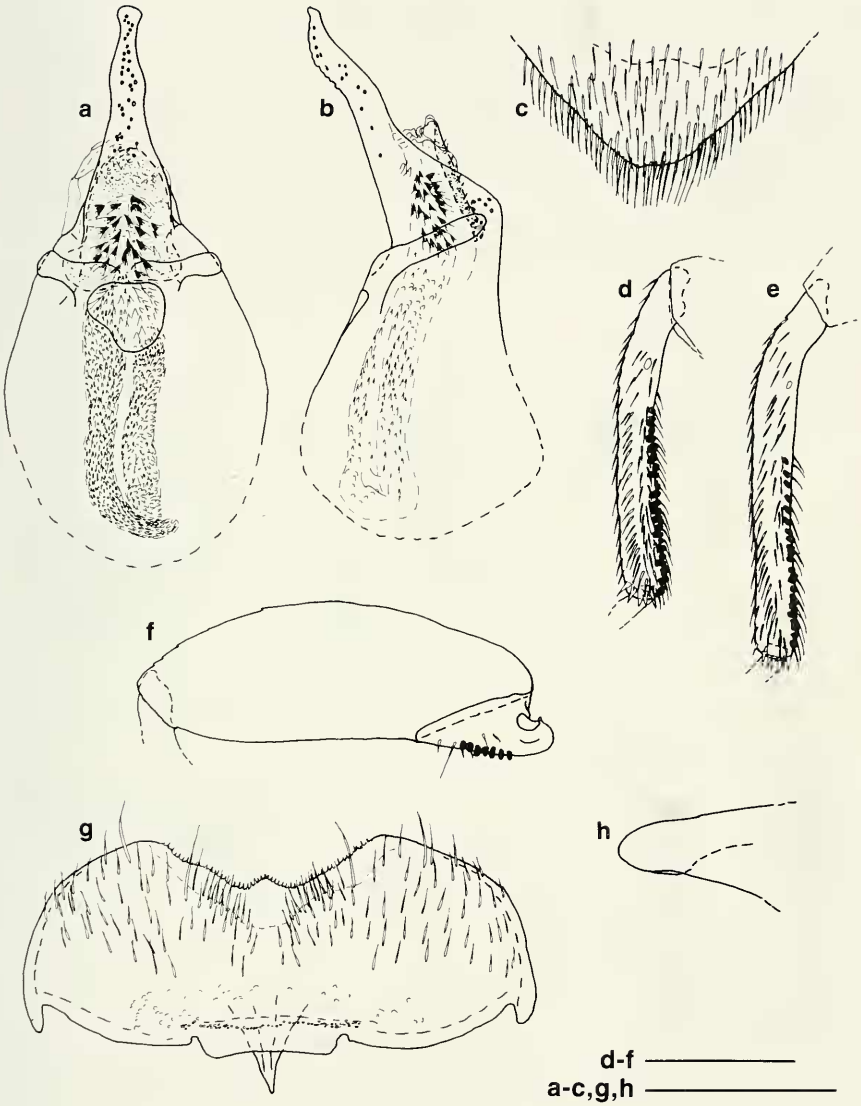

FIG. 61

Megarthrus twa, male; a, b: aedeagus, ventral and lateral; c, h: apex of abdominal tergite 8, dorsal and lateral; d: mesotibia; e: metatibia; f: mesofemur and mesotrochanter; g: abdominal sternite 8. Scale bars = 0.2 mm.

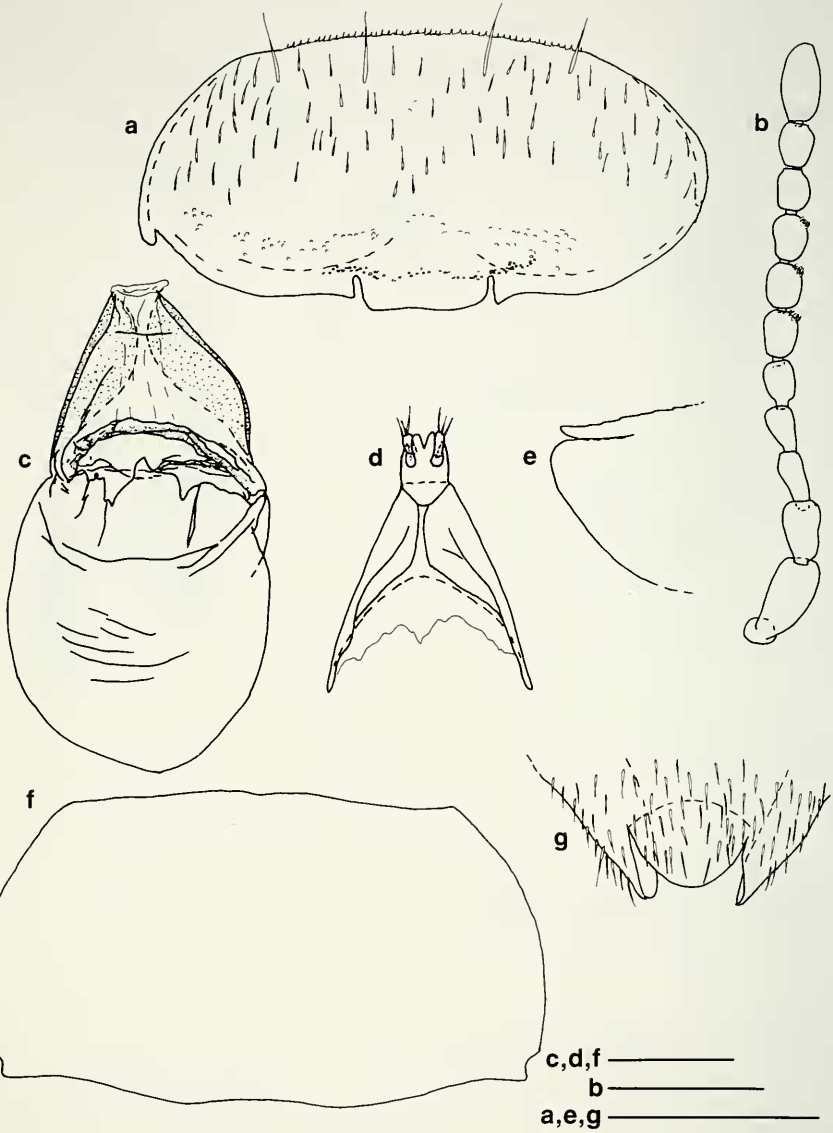

FIG. 62

Megarthrus twa: a: female, abdominal sternite 8; b: antenna; c, d: female, genital segment, tergites (c) and sternites (d); e, g: female, apex of abdominal tergite 8, lateral and dorsal; f: pronotum. Scale bars = 0.2 mm.

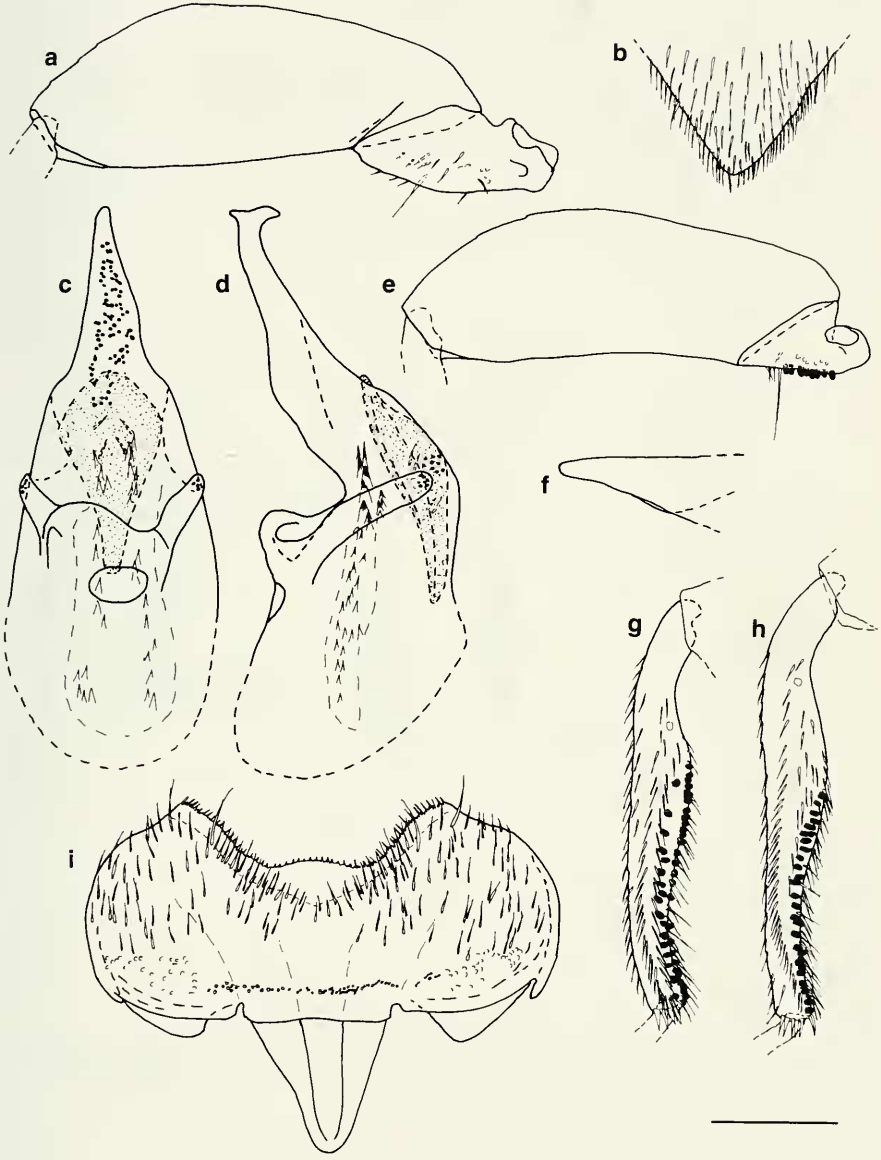

FIG. 63

Megarthrus vanschuytbroecki, male; a: metafemur and metatrochanter; b, f: apex of abdominal tergite 8, dorsal and lateral; c, d: aedeagus, ventral and lateral; e: mesofemur and mesotrochanter; g: mesotibia; h: metatibia; i: abdominal sternite 8. Scale bar = 0.2 mm.

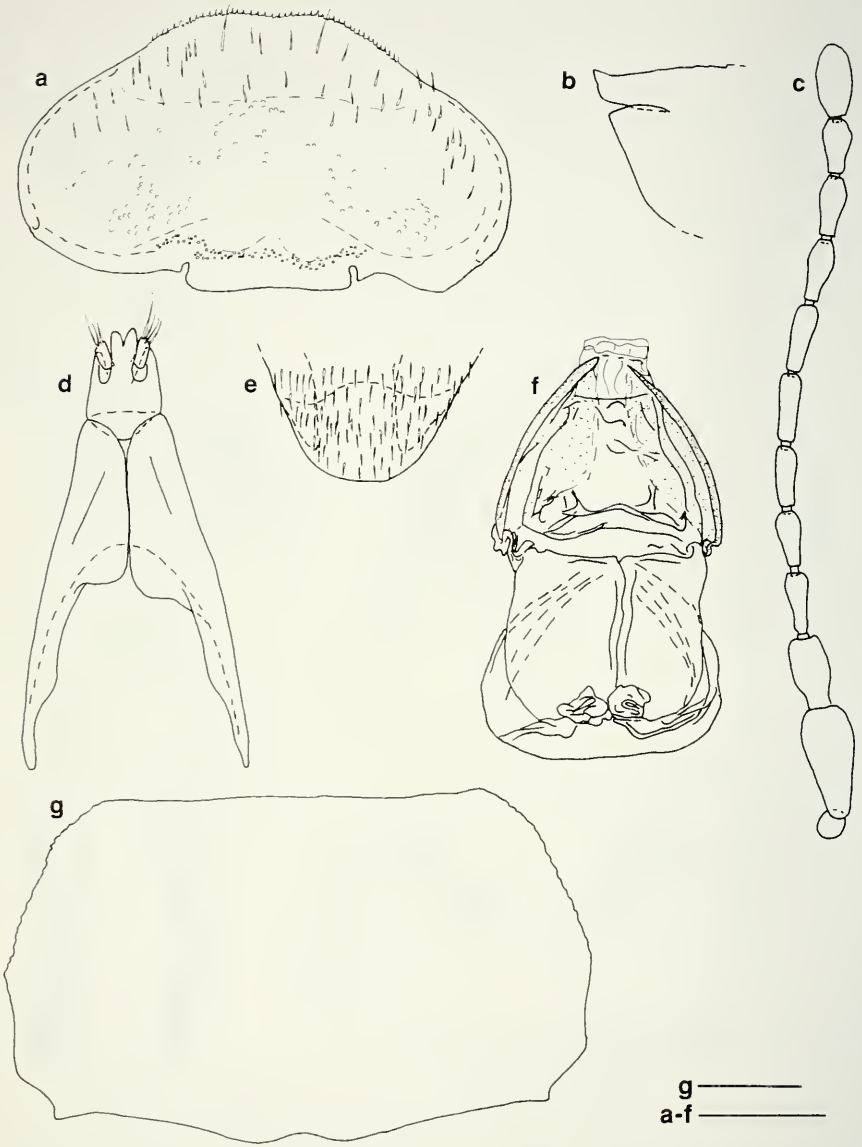

FIG. 64

Megarthrus vanschuytbroecki: a: female, abdominal sternite 8; b, e: female, apex of abdominal tergite 8, lateral and dorsal; c: antenna; d, f: female, genital segment, sternites (d) and tergites (f); g: pronotum. Scale bars = 0.2 mm.

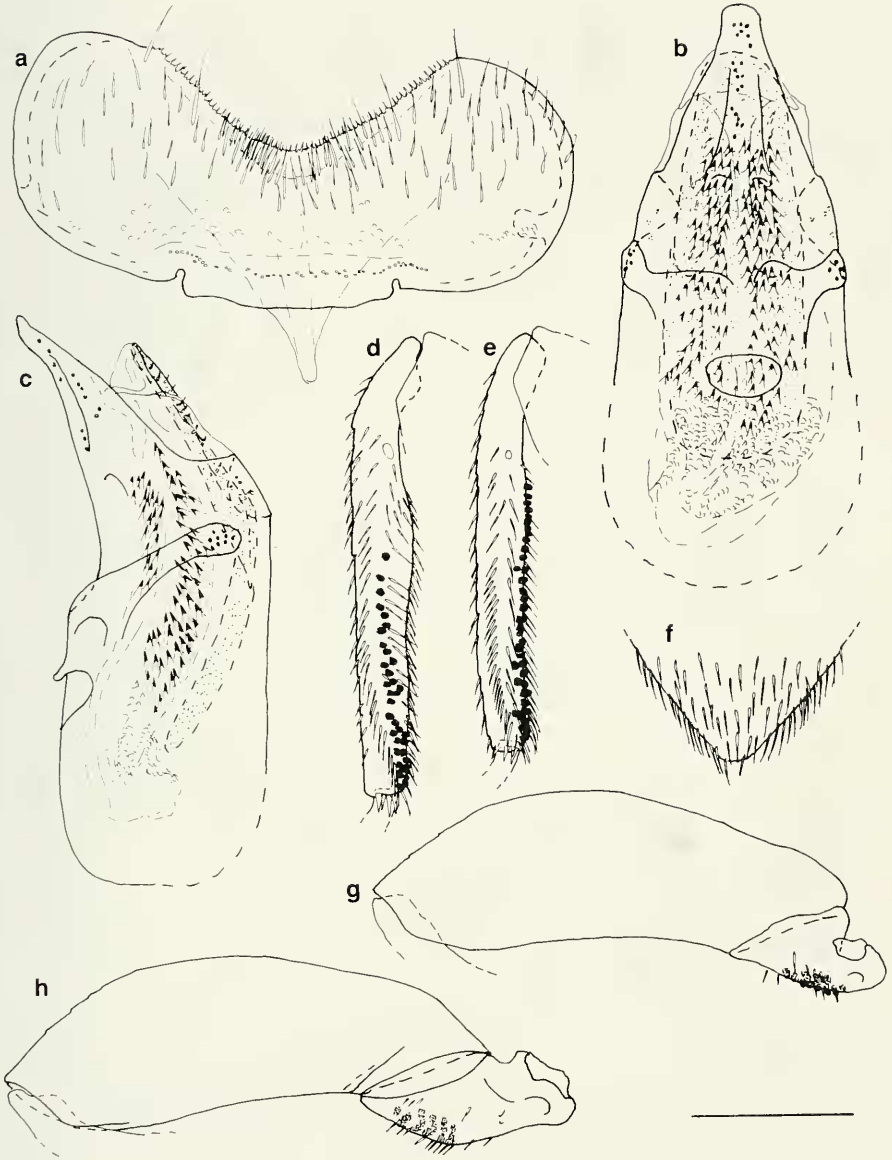

FIG. 65

Megarthrus watutsi, male; a: abdominal sternite 8; b, c: aedeagus, ventral and lateral; d: metatibia; e: mesotibia; f: apex of abdominal tergite 8, dorsal; g: mesofemur and mesotrochanter; h: metafemur and metatrochanter. Scale bar = 0.2 mm.

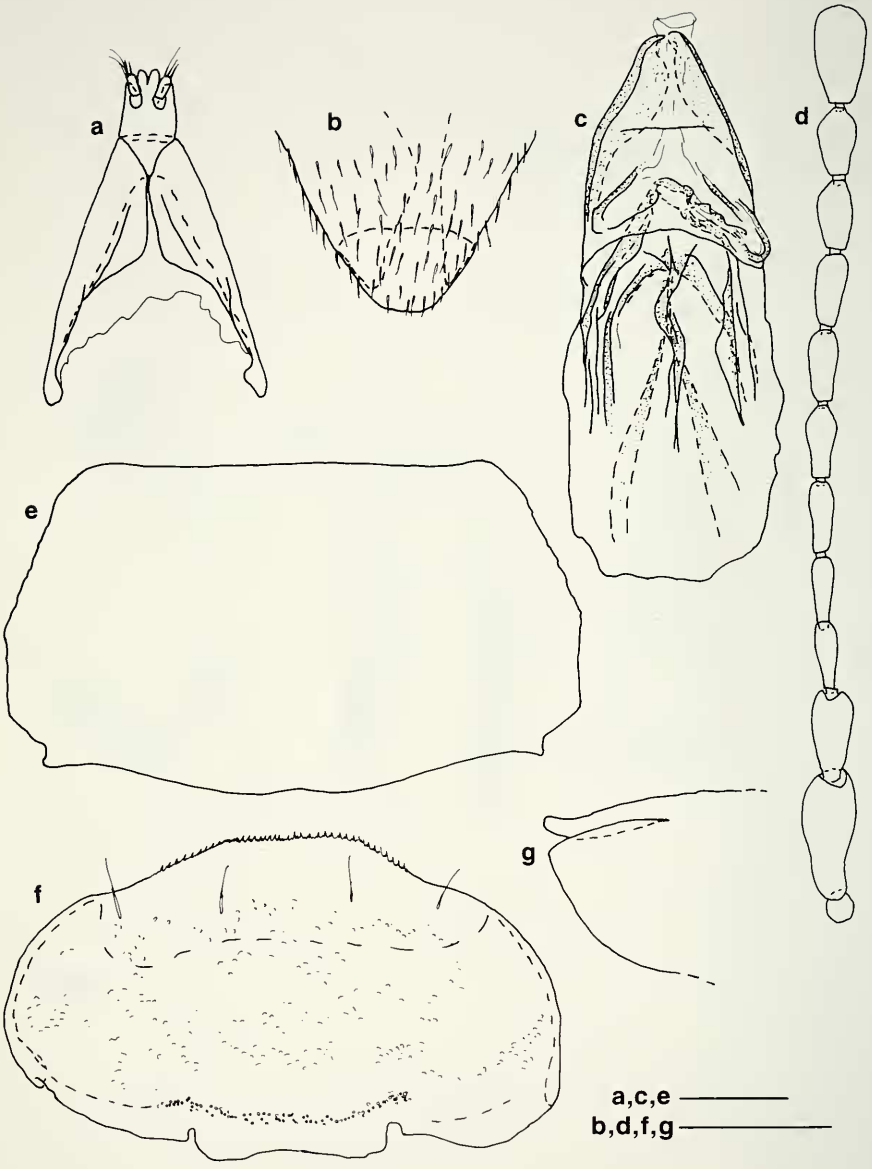

FIG. 66

Megarthrus watutsi; a, c: female, genital segment, sternites (a) and tergites (c); b, g: female, apex of abdominal tergite 8, dorsal and lateral; d: antenna; e: pronotum; f: female, abdominal sternite 8. Scale bars = 0.2 mm.

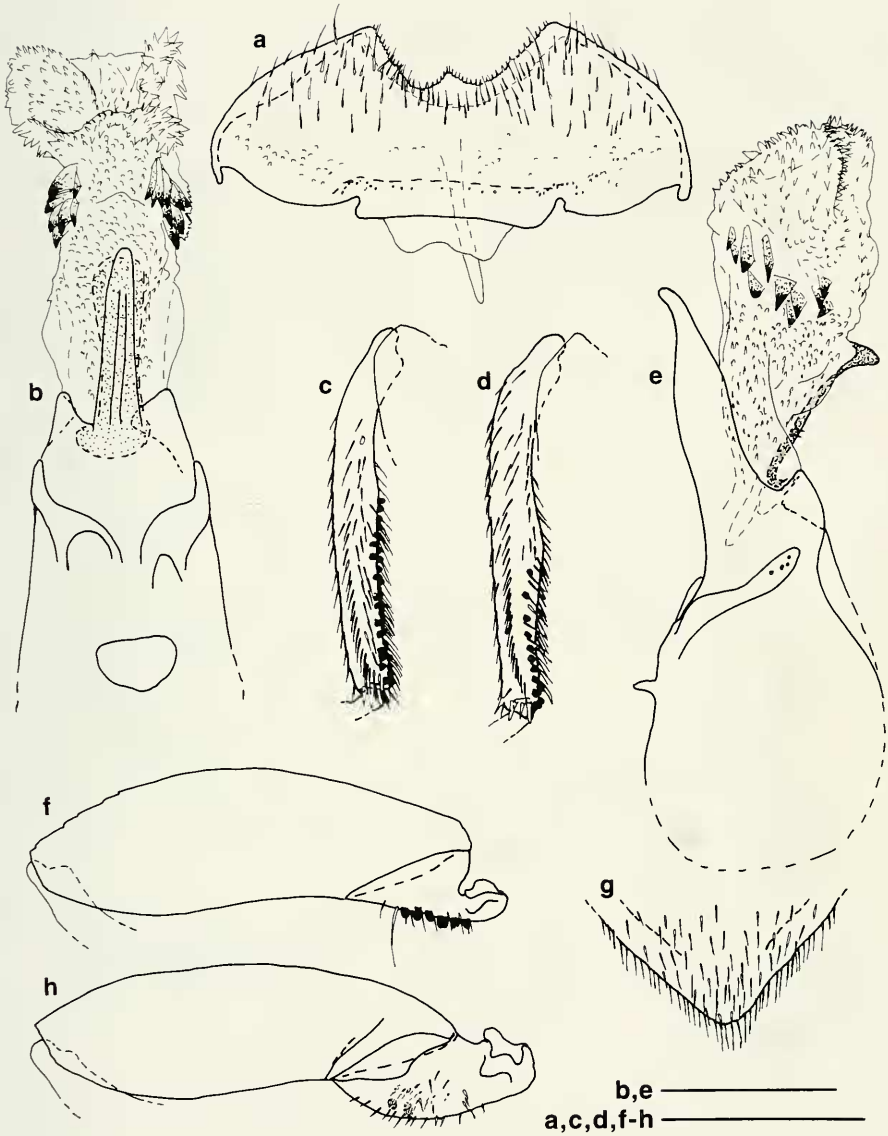

FIG. 67

Megarthrus wittei, male; a: abdominal sternite 8; b, e: aedeagus, ventral and lateral; c: mesotibia; d: metatibia; f: mesofemur and mesotrochanter; g: apex of abdominal tergite 8, dorsal; h: metafemur and metatrochanter. Scale bars = 0.2 mm.

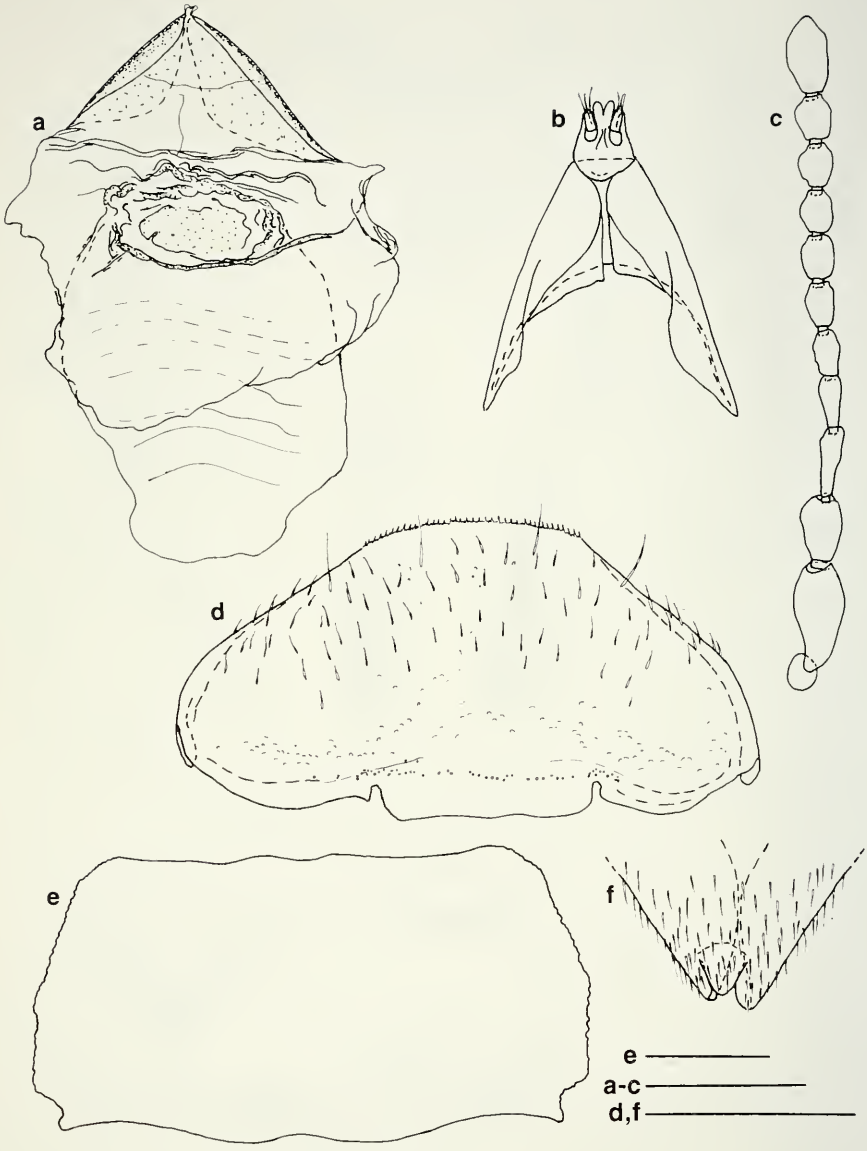

FIG. 68

Megarthrus wittei; a, b: female, genital segment, tergites (a) and sternites (b); c: antenna; d; f: female, abdominal sternite 8; e: pronotum; f: female, apex of abdominal tergite 8, dorsal. Scale bars = 0.2 mm.

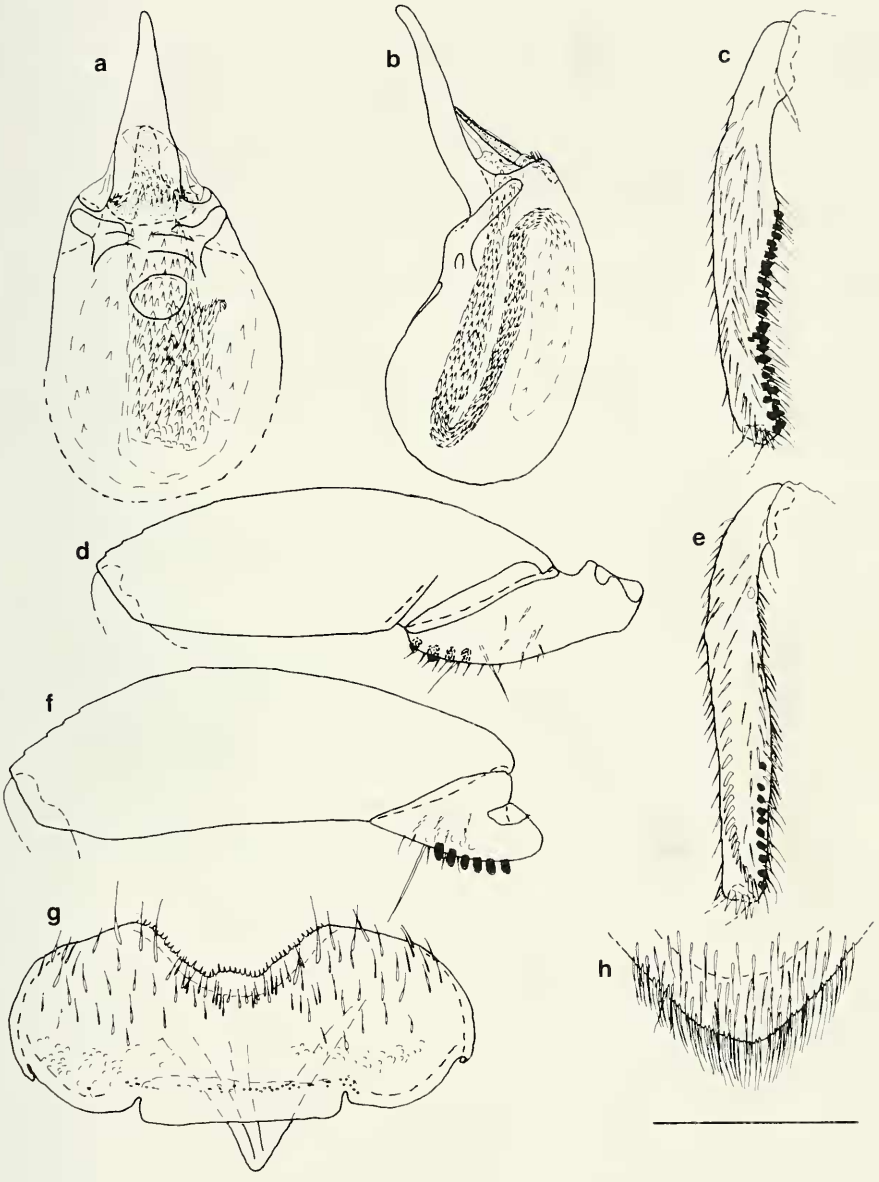

FIG. 69

Megarthrus zulu, male; a, b: aedeagus, ventral and lateral; c: mesotibia; d: metafemur and metatrochanter; e: metatibia; f: mesofemur and mesotrochanter; g: abdominal sternite 8; h: apex of abdominal tergite 8, dorsal. Scale bar = 0.2 mm.

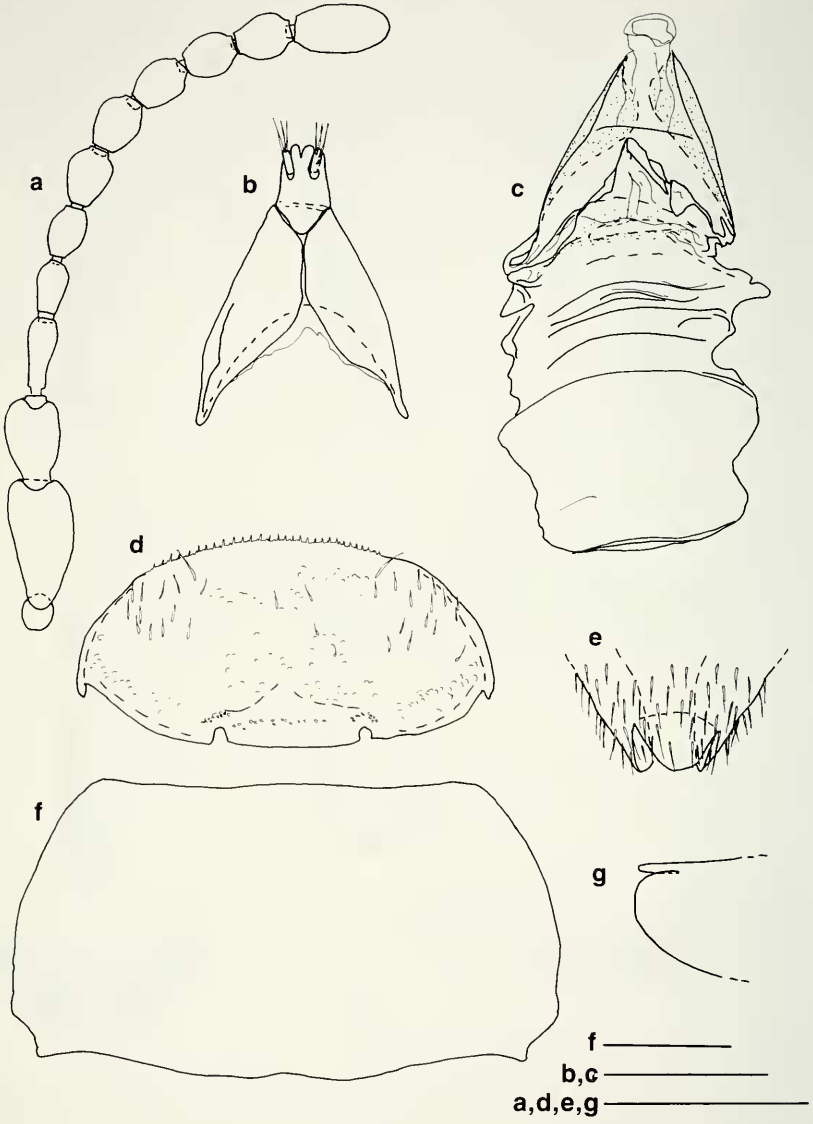

FIG. 70

Megarthrus zulu; a: antenna; b, c: female, genital segment, sternites (b) and tergites (c); d: female, abdominal sternite 8; e, g: female, apex of abdominal tergite 8, dorsal and lateral; f: pronotum. Scale bars = 0.2 mm.

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